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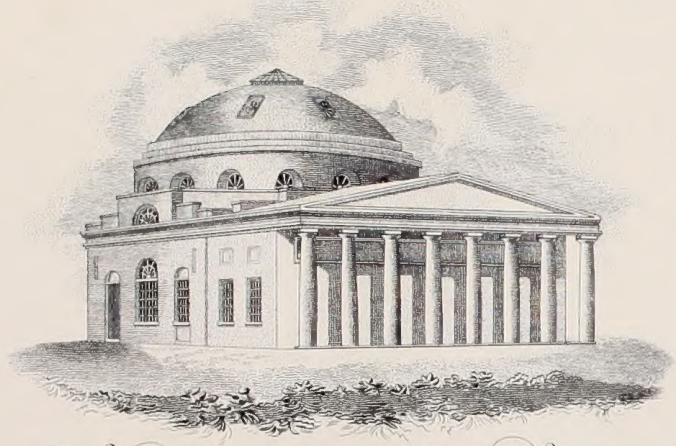

University of Maryland

MAY 2

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

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(CORRECTED TABLE OF CONTENTS)

UNIVERSITY OF MARYLAND

THESES

1886, 1887

Author	Title	Year	Notes
Allen, A. Oden	Typhoid Fever	1887	(no title page)
Allen, Charles Lewis	Bile	1887	
Ard, Frank C.	Periodical Hyperaesthetic Rhinitis	1887	
Ballard, Edwin, K.	Anaesthetics[1]	1886	
Bernstein, Edward J.	Blood[2]	1887	
Bland, T. Jackson	Acute Simple Laryngitis	1887	(no title page)
Bower, George B. M.	Typhoid Fever	1887	
Brockbank, Joseph W.	Lobar Pneumonia	1887	
Brooke, Roger	Enteric Fever	1887	
Brooke, Edgar H.	Secretory Function of the Kidneys	1887	
Brubaker, Peter C.	Pneumonia	1887	
Chapman, William A.	Typhoid Fever	1887	
Cherry, W. F.	Measles	1887	
Clark, Cheever S.	Medicine and Hygiene	1887	

[1] Thesis dated April 12th, 1886.
[2] Title page dated October 1886, first page of thesis dated Feb. 1st, 1887.

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1851-1892; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

Author	Title	Year	Notes
Cole, G. R. Lee	Simple Intermittent Fever[3]	1887	
Corcoran, George	Valvular Disease of the Heart	1887	
Corkran, James M.	Eclampsia Pueroeralis[4]	1887	
Corse, William D.	Pericarditis	1887	
Crutchfield, Eugene	Acute Catarrh of the Nose and the Posterior Nares	1887	
Daniel, Starkie S.	Ovariotomy	1887	
Davidson, W. S.	Typhoid Fever	1887	
Davis, John	Irritation and Inflammation	1887	
Drewry, Madison R.	Intermittent Fever or Chills and Fever	1887	(no title page)
Du Hadway, John	Pneumonia	1887	
Edmonds, H. J. Jr.	Typhoid Fever	1887	
Elgin, W. F.	Oculus Eruditus	1887	
Engle, O. C.	Chemistry of Digestion	1887	
Fearington, Joseph P.	Treatment of Obstinate Malarial Attacks	1887	(no title page)
Fowlkes, Francis V.	Bronchial Asthma	1887	
Frasher, Elmer F.	Clinical Report of Four Cases of Disease[5]	1887	

[3] Pages 5 and 6 are bound upside down.
[4] Title page at the end of thesis.

[5] Noteworthy charts of vital signs
HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1851-1892; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

UNIVERSITY OF MARYLAND

SCHOOL OF MEDICINE

THESES

1887(a)

Allen, A. Oden not in card	Typhoid Fever	17p.
Allen, Charles Lewis	The Bile	23p.
Ard, Frank C.	Periodical Hyperaesthetic Rhinitis	21p.
Ballard, Edwin K.	Anaesthetics	25p.
Bernstein, Edward J.	Blood	31p.
Bland, T. Jackson	Acute Simple Laryngitis	33p.
Bower, George B. M.	Typhoid Fever	28p.
Brockbank, Joseph W.	Lobar Pneumonia	36p.
Brooke, Roger	Enteric Fever	16p.
Brooke, Edgar H.	The Secretory Function of the Kidneys	30p.
Brubaker, Peter C. not in card	Pneumonia	23p.
Chapman, ~~Wm.~~ William A.	Typhoid Fever	27p.
Cherry, W. F.	Measles	19p.
~~Clarke~~ Clark, Cheever S.	Medicine and Hygiene	18p.
Cole, G. R. Lee	Simple Intermittent Fever	36p.
Corcoran, George M.	Valvular Disease of the Heart	32p.
Corkran, James M.	Eclampsia Puerperalis	25p.
Corse, ~~Wm.~~ William D.	Pericarditis	20p.
Crutchfield, Eugene	Acute Catarrah of the Nose and the Posterior Nares	36p.
Daniel, Starkie S.	Ovariotomy	28p.

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Davidson, W. S.	Typhoid Fever	25p.
Davis, John	Irritation and Inflammation	26p.
Drewry, ~~M.~~ Madison R.	Intermittent Fever	19p.
Du Hadway, John	Pneumonia	30p.
Edmonds, H. J. Jr.	Typhoid Fever	22p.
Elgin, W. F.	Oculus Eruditus	19p.
Engle, O. C.	Chemistry of Digestion	20p.
Fearington, ~~J.~~ Joseph P.	Treatment of Obstinate Malarial Attacks	12p.
Fowlkes, ~~F.~~ Francis V.	Bronchial Asthma	16p.
Frasher, Elmer F.	A Clinical Report of Four Cases of Disease	24p.

Typhoid fever.

[illegible]

[illegible] typhoid fever [illegible] and enteric fever. [illegible] of typhoid fever.

[illegible]

[illegible] swelling

ing of the mucous membrane of
the Illeum at its lower part, the
Patches of Peyer being especially
involved. From the absorbent
system of the intestine the
disease becomes conveyed pro-
bably the Mesenteric glands [illegible]
to and [illegible] the viscera especi-
ally the Spleen.

Symptoms.

There is generally a week or so
before the person is completely
[illegible] to his bed. [illegible]
[illegible]
general indisposition [illegible]
[illegible] loss of appetite [illegible]
[illegible]
[illegible]

[illegible]
not feel refreshed when awaken [illegible]
[illegible]
[illegible]
may have a sort of periodical
[illegible]
[illegible]
[illegible] partly [illegible]
[illegible]
usual manner in which the dis-
ease comes on, but sometimes [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] tongue is dry coated

[illegible]
[illegible] Lake [illegible] redness
of more or less. The nose feels hard
and dry and presents a cracked or
fissured with its edges raised and
glazed looking. When fed out it is
brownish. During this week there
is generally some delirium of a low
[illegible] of fact, [illegible]
[illegible] not constant. In fact there may be
[illegible] tendency to constipation in most
cases a purgative is [illegible] to act with
good violence. The fever is of a re-
mittent character and [illegible]
[illegible] with an occasional
remission and an evening rise

lation, but each vacculation is a little worse than the one before until the maximum is reached with [illegible] of the [illegible] week. During this [illegible] is [illegible] [illegible] and it [illegible] to [illegible] again. In favorable cases this the burning point and the pal[illegible] [illegible] third and fourth weeks that c[illegible] ulcerations are most apt to set in, such as ulceration perforation and peritonitis &c.

During the second and third weeks the diarrhoea runs its highest [illegible] [illegible] "Pea Soup" [illegible] and [illegible] into layers of

[illegible]

105.

Etiology

This [illegible]

[illegible]

[illegible] ~~[illegible]~~ [illegible]

[illegible] maintained by some eminent au-

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] which it

[illegible]

from this subject [illegible]
[illegible] [illegible]
[illegible] [illegible]
and epidemic is produced.

Diagnosis.

The diseases with which this is most likely to be confounded are Typhus and [illegible] Fever. In consequence of rapidity, [illegible] of completion, and [illegible] grade of the temperature, and gradual onset.

From Typhus it may be known from absence of following symptoms, viz. the tongue, and pressure of the [illegible] is typhoid. No epistaxis, nor [illegible] cities; bowels constipated, [illegible].

sudden [illegible] eruption
[illegible] day, [illegible]
[illegible] effusion within [illegible] days,
[illegible] death [illegible],
[illegible] [illegible],
[illegible] peculiar.

From bronchitis. In bronchitis we have bronchial rales.

From acute tuberculosis. In acute tuberculosis you have bronchial rales and in tuberculosis there high [illegible].

Prognosis.

It is variable. Average mortality about 20 p/c.

Treatment

In mild cases of this disease
no treatment is required but
it is important that the patient
should be kept [illegible] as much
as possible, and be put to bed
immediately [illegible] first
the pain and burning, the bowels
should be opened by an aperient
kept clean & about sixty or seventy
to zero drops if possible be
lift must be so arranged that
no [illegible] should be upon
the patient. Perfect quiet should
be insisted upon, the diet should
be restricted to bread and beef
tea milk &c. If temperature [illegible]

not even above 103 antipyretics
[illegible] There is no pos-
sibility of collapse [illegible] attack
of typhoid fever, so [illegible] must
be patient [illegible] [illegible]
[illegible] Watching the temperature and
treating [illegible] as they come.
When temperature is high [illegible]
cold [illegible] it is by far the best
[illegible] antipyretic drug is about 15
to 20 gr. dose [illegible] 30 to 40 gr.
until temperature falls [illegible] is
generally [illegible] above [illegible] 41 [illegible]
[illegible] after dose has been given
the temperature will begin to
fall [illegible] [illegible] and [illegible]
will [illegible] if [illegible] [illegible] will

[illegible] stationary for [illegible] 19 to 24 after temperature has been reduced it is necessary to [illegible] the administration of cai[illegible] [illegible] temperature begins to rise again a dose [illegible] be given. By administering cai[illegible] [illegible] the temperature [illegible] to be kept below a 102.8° the [illegible] produce [illegible] in this way it may be administered [illegible] [illegible] of the [illegible] [illegible] 4 [illegible] is about 20 [illegible] of [illegible] in the [illegible] case, in this [illegible] [illegible] fever is one of the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

to the depressing influence of
[illegible] to the [illegible]
[illegible] [illegible] by
using a [illegible].

For this [illegible] bath is [illegible]
recommended in high [illegible]
[illegible], but the water should be
temperature of 65 to 70° and [illegible]
the patient in this if the [illegible]
pulse falls [illegible] 100 to 120 or 30 minutes before
out, but if it feel [illegible] you
[illegible] stop [illegible] until the
temperature has reached [illegible]
in 100 to 120 of normal, supposing
the temperature to have been up
to a 104° or 5°. This treatment would

only be needed to damp the first one days, after that time it is not so safe, but after that time the cold sponge bath may be resumed & use on the sponge bath should not extend but one part of the patient at a time.

Stimulants are very important in some stages of this disease but their use has been very much abused. Indication for the use of stimulants should be carefully looked for & given with care & forethought. The pulse of the affected color but only little. Indication for administration is weak and rapid

pulse, coma, &c. &c. For a dose in adults the medicine should be given 110 grs. [illegible], [illegible] about 23 [illegible] every 2 hours, [illegible] solution [illegible] to give [illegible]. The same may be given [illegible] or even every 15 minutes. The first dose should be watched with great care, and if any unfavorable effects be observed, such as any increased [illegible] of any kind, withdraw it at once. On the other hand if the pulse be improved and the tongue grow more moist, it should be continued.

If diarrhoea be slight in amount not exceeding 2 or 3 stools

a day, you need not do anything for it. If any treatment be found necessary, compound chalk powder will be found most beneficial. It is best combined with some of the vegetable astringents, e.g. 3 parts of chalk to 1 of Kino or Catechu &c.

The best treatment for bad teeth is not to let them decay, by not allowing food to remain too long in one position, spongy parts must be opened & purified with some form of alcohol, but by probably the best, if such be obtainable procurable, they should be bathed in a solution of carbolic acid gr. ½ to ℥j. and then powder

[illegible] with Balcom [illegible].

[illegible]
[illegible]

The Bible

Thesis for graduation,
of
Chas. Lewis Allen.

University of Maryland.
Feb. 15th 1887.

Thesis

The Bile

A short account of it's genesis, chemistry & probable functions.

In order to understand properly, the secretion of the bile, it is necessary for us to study briefly, the structure & probable working of the liver.

Structure of Liver

The liver is the largest glandular organ in the body, weighing in mean from 50 to 60 oz. It differs from all other glands both in structure & in having a double function, both nutritive & excretory. (With it's excretory function are we mainly (though not entirely) concerned, for the chief function of the bile is excretory. The liver is made up of a number of lobules, minute in size, but each in itself a liver in miniature. These lobules are from 1/24 - 1/12 of an inch in diameter, & are made up of liver cells - polyhedral in shape 1/100 to 1/50 of an inch in diameter & having granular contents -, of connective tissue & vessels. The vessels of the liver, fall into five sets, communicating

respectively, with the hepatic artery, the hepatic, vein, the portal vein, ~~the hepatic duct, & the lymphatic~~ system. The hepatic artery, brings arterial blood, the portal vein venous blood, from all the abdominal viscera except the kidney, the hepatic vein carries venous blood from the liver back to the general circulation & the hepatic duct takes off the biliary secretion. It will be only necessary for us to study the minute anatomy of a lobule, for as before stated it is, in itself a liver. The branches of the portal vein, hepatic artery, & hepatic duct run together, enclosed in a sheath of connective tissue, (Capsule of Glisson) while the branches of the hepatic vein run by themselves in separate canals. This connective tissue sheath, assists in forming the framework of the lobules, though in man the amount of connective tissue is small. The lobules then are made up of cells, a vascular net work & some connective tissue. The branches of the portal vein run on the outside of the lobules, break up into capillaries, which enter the lobule running between the cells & at their angles — & gradually converging toward the

centre ~~to form~~ & ~~anastomose~~ uniting to form a small vein, a branch of the hepatic vein. These ~~small branches~~ of the portal are called interlobular, & the branches of the hepatic vein formed, intralobular veins. The small branches of the hepatic artery, ramify with those of the portal vein, & breaking up, with the connective tissue & sheaths of the vessels, & finally breaking up into capillaries ~~supply~~ a few branches ~~join~~ enter the lobule & joining with the interlobular capillaries from the portal help to make up the intralobular vein. The intralobular veins join to form sublobular veins & these form the hepatic vein. The lobule cells are polyhedral in shape have granular contents & a nucleus. They are packed closely together, the blood capillaries running between their angles, while between the sides of the cells, there are minute passages, bile canaliculi or capillaries. It was thought that these bile canaliculi had not proper walls, but were bounded by the cell-walls alone, but more recent experiments seem to ~~prove~~ show, that they have a very delicate walls of their own (Frey). They unite ~~to form bile capillaries~~

& ~~these~~ they go on to form the interlobular bile ducts, converging to the hepatic duct.

& The bile ducts are lined by columnar epithelium on a thin structureless basement membrane. The larger bile & the hepatic ducts ~~have~~ a fibrous coat & are lined by mucous membrane containing mucous glands. The lymphatics are numerous & interspersed through the liver. The liver has its nervous supply, from the Pneumogastric & the hepatic plexus (from the solar plexus) & the Phrenic.

~~The~~ Two branches from either lobe, converge to form the hepatic duct & this is speedily joined by the cystic duct from the gall bladder, the two forming the ductus communis choledochus, which enters at an angle into the back of the duodenum. The

Gall-bladder. gall-bladder is a pyriform bag situated in a fissure on the under surface of the liver, having a capacity of about 1½ oz of fluid. It's middle coat contains connective tissue & some involuntary muscular fibres & it is lined with mucous membrane containing glands secreting a viscid mucus. The mucous membrane in the cystic duct ~~p~~ is thrown into folds, forming a spiral valve. The gall-bladder serves as a reservoir for the bile, until needed.

Having now considered briefly the structure of the organ in which it is produced, we are prepared to ~~take up~~ the secretion of the bile as to its physiology & mechanism. As before stated, the liver has a twofold function, that of a secreting & that of a ductless gland. The size of the organ & its number of cells seem out of proportion to the amount of bile produced & is best explained by this double function. Although some physiologists have thought otherwise, it seems fully certain that the cells of the lobules are produce both ~~secretions~~ bile & glycogen. The bile alone concerns us at present. The bile contains both excrementitious & recrementitious substances. Some of its constituents seem merely to be purged from the blood, while others are elaborated from materials furnished by the blood. The question as to whether the secretion is from the portal venous blood, or the hepatic arterial blood has arisen, and experiments go to show, that it may come from either, if a sufficient quantity of blood is furnished. The secretion is doubtless under the influence of the nervous system, but their relation has not been

Secretion of bile.

well made out, although the reflex influence of the digestive process is apparent. (Flint) The blood supply seems also to influence. The secretion is continuous, but becomes more active after a meal, increasing until the 2nd hour, when it is at its maximum & so continues for about seven hours, when it rapidly declines.
Bile secreted is stored up in the gall-bladder until when during digestion, the acid chyme passes into the duodenum, then by reflex, the muscular fibres of the gall-bladder, are stimulated to contract & it is forced out to mingle with the contents of the intestine. The bile is secreted under a very low pressure & by very little obstruction is backed up in the liver & gets into the blood probably by the medium of the lymphatics.
The quantity & composition of bile is much influenced by diet, & by various substances introduced into the organism. During fasting its quantity is much reduced on a fat diet it is low, on vegetable food higher & on nitrogenous food highest.
During digestion the acids are first increased then diminished & afterwards again increased. There is an increase of the acids, after

~~an~~ injection into the blood of an aqueous solution of biliary acids, of the pigments, after ~~an injection of oxyhemoglobin,~~ or bilirubin. Certain medicines also alter. The average quantity of the bile seems, a little over 2 p.c. of the body weight every 24 hours.

Properties of bile.

Bile coming directly from the liver, is a clear syrupy liquid of a ~~color~~ varying from golden-brown, to yellowish green, differing in different animals. In ~~the~~ man, the golden brown predominates. It has a sweetish bitter taste, ~~it~~ slightly musky odor, a warming, is slightly alkaline normally in man (though occasionally slightly acid without serious disturbance), & has a specific gravity of 1.009 to 1.032. It is non coagulable & froths on shaking. Contains some mucus. After having lain in the gall-bladder for some time, bile becomes thicker & more viscid, from gain of mucus, has a sour smell, darker color, & may contain particles of fat & calcium phosphate. Normal human bile when fresh, gives no absorption spectra, but ~~bt~~ when bile which has stood for some time, or an alcoholic extract, gives 4 lines, one in the red, ~~two~~ in the yellow & one in the green those in the yellow, being most distinct.

sition
bile.

To obtain the pure secretion, a biliary fistula is necessary, but for ordinary demonstration ~~the important constituents may be shown~~, in post mortem bile, or may be obtained from biliary calculi. To obtain purified bile for analytical purposes, mix the bile with 5 times its volume of absolute Alcohol, let stand awhile, filter & evaporate the filtrate to dryness. The residue dissolves in water, gives the reactions well (Gilchrist) & the bile contains ~~these~~ the important constituents the Biliary acids, the Biliary pigments & cholesterin. Besides these there are lecithin, choline, fats, soaps, a diastatic ferment & mineral salts. The three first need alone concern us here. These constituents are quite variable in amount, as is also the total amount of solids. Post mortem bile contains a higher per centage of solids, than that coming away from a fistula. 10-14% against 1.2 - 2.3%. But from certain considerations it seems that this percentage is nearer the normal condition, than that of bile from a fistula (Gilchrist). The following analyses will give a fair idea of the composition of bile. No I Human Bile (Frerichs, Gmelin-Bacon)
No II, Solids from Post. mortem bile (Hoppe Seyler)
No III in 100 parts of dry solids of bile from a fistula, having a Sp 1.010 & 2.24-2.28% solids (Jacobsen)

I.

Water	86 to 90 p.c.
Solids	14 to 10 "

Bilary acids & salts	5.6 "	10.0 "
Fats	0.3 "	1.70 "
Cholesterin	0.4 "	1.0 "
Mucus & Pigments	1.4 "	2.9 "
Mineral salts	0.6 "	1.0 "

II

Glycocholate of Sodium	3.03 p.c.
Taurocholate " "	0.87 "
(containing Sulphur)	(0.05) "
Soaps	1.89 "
Mucin	1.29 "
Lecithin	0.53 "
Cholesterin	0.35 "
Other organic subs. insol in alcohol	0.14
Iron probably as phosphate	0.006 "

III

Glycocholate of Sodium	44.80 "
Chloride of Sodium	24.50 "
Palmitate & Stearate of Sodium	6.40 "
Phosphate of Sodium	5.90 "
Carbonate " "	4.20 "
~~Phosphate of Calcium~~ Cholesterin	2.50 "
~~Chloride of Potassium~~ Phosphate of Calcium	1.60 "
Chloride of Potassium	1.20 "
Lecithin	0.20 "
Fats	0.40 "
Residue insoluble in alcohol & Ether	8.10 "

& the acids & bile pigments are the ~~important~~ characteristic constituents. Most modern analyses indicate that Glycocholic acid is preponderant in human bile. The Cholesterin is kept in solution by the sodium salts of the biliary acids & the fats are held as soaps, so that fresh bile is a homogeneous liquid. The mineral constituents form the ash. Bile also contains gases partly in solution & partly combined. These are mainly CO_2 with traces of O & N.

Having considered the general properties of the bile, we may examine briefly those of its resin constituents.

Properties of resin constituents

Acids

The Biliary acids are Glycocholic & Taurocholic. These occur ~~usually~~ almost entirely (in man) as ~~their~~ sodium salts. They are quite readily split up, ~~forming~~ undergoing hydration, by boiling with acids or alkalies, forming Cholic acid & respectively Glycocoll & Taurine. e.g. $C_{26}H_{43}NO_6 + H_2O = C_{24}H_{40}O_5 + C_2H_5NO_2$ (Glycocholic acid / Cholic acid / Glycocoll)

Cholic acid may be broken up still further ~~into~~ give rise to a resinous substance, Dyslysin. It seems probable that these acids are reabsorbed chiefly in the jejunum & ileum & excreted, after further oxidation,

for cholic acid & its derivatives are found in the intestines (more especially in diseased conditions). The biliary acids are not found in the blood, although Glycocin & Taurine are possibly constituents of the organism. These acids, seem to be formed in the liver, the Nitrogen radicle being derived from an albuminoid, the cholic acid radicle from fats.

The biliary acids are separated from bile, by adding animal charcoal, evaporating to dryness, extracting the residue with absolute alcohol, filtering, distilling off the alcohol from the filtrate, taking up in a little absolute alcohol, & adding Ether until it becomes turbid. Let stand a day or two, & a white crystalline mass settles. This is "Platner's Crystallized bile" & is a mixture of Glycocholate & Taurocholate of Sodium. These crystals may be caught on a filter washed with water & redissolved in dilute alcohol, the Glycocholic acid precipitated by ~~basic~~ neutral lead acetate, & a basic Pb. S ~~in the~~ filtered off & the Taurocholic acid in the filtrate precipitated by acetate of ~~Lead~~ & Ammonium. From each the acid is separated, after solution of the salt in alcohol, by sulphuretted Hydrogen & filtered off & in the filtrate the ~~capsule~~ acid ~~washed in alcohol~~ & precipitated by addition of water. (T. C. Charles)

Properties – (a) Glycocholic acid, ~~C_{26}~~ ($C_{26}H_{43}NO_6$) occurs in 2 forms, in fine crystalline needles, & an amorphous resinous mass. It is a monobasic acid, combining with alkalies, alkaline earths, Ag, Pb, &c. to form salts. Insol. in acids (Ac, H_2SO_4, HCl) & in alkaline solutions forming salts, & in Glycerine, very slightly soluble in cold, more in boiling water, almost insol – in ether, but very soluble in alcohol. (b) Taurocholic acid ($C_{26}H_{45}NSO_7$) – forms silky needles which easily deliquesce. It is quite unstable, easily decomposing to Cholic acid & Taurine. Soluble in water & alcohol, precipitated by basic acetate of lead. Differs from Glycocholic acid in containing sulphur, by which amount in a mixture of the two acids, ~~some~~ the proportion of taurocholic acid is determined.

Bile pigments. The Biliary pigments, are Bilirubin & Biliverdin normally, though some others (Bilifuscin, Bilifrosin, Bilihumin & Hydrobilirubin) have also been described. Bile fresh from the hepatic duct, contains Bilirubin alone. Biliverdin is Bilirubin + O + H_2O. The others seem also derivatives of Bilirubin which itself seems closely related to Haematin, a derivative of Haemoglobin. These pigments act as weak acids,

combining with alkalies, & alkaline earths.
Preparation from human bile - "Add an excess of alcohol, then a little ammonia & calcium chloride, filter, & exhaust the precipitate with alcohol. The residue is treated with dilute HCl - & after having been washed with water, is extracted, with alcohol which dissolves out the Bilifuscin, while the insoluble part is digested with chloroform which dissolves up the Bilirubin" (Thudichum) Bilirubin may be separated from the chloroform, by evaporation or precipitation with alcohol. Biliverdin is prepared, by exposing an alkaline solution of bilirubin to the air, until it becomes intensely green, then precipitating + HCl, filtering & washing thoroughly, dissolving in absolute alcohol & precipitating with water. (Charles) Properties - (a) Bilirubin & ($C_{16}H_9NO_2$) (Thudichum) is the chief pigment of human bile. It is a fine orange or red amorphous, or dark red crystalline powder, soluble in alkaline carbonates, precipitated by HCl. Soluble also in Chloroform & Benzol although its alkaline combinations are not; very sparingly sol. in Alcohol & Ether. Its color is evident even in weak solutions.
By HNO_3 it is oxidized, different products resulting at different degrees of oxidation. & on this, the tests for it depend.

By the action of nascent ~~H~~ Hydrogen on Bilirubin, ~~H~~ by Urobilirubin, apparently identical with Stercobilin the coloring matter of the fæces (Glasius) & Urobilin (Stokvis) is formed. By the action of air & light an alkaline solution of Bilirubin becomes Biliverdin. (b) Biliverdin ($C_8H_9NO_2$ (Thudichum) is abundant in the blood of cold blooded animals & of warm blooded animals starving. It is an amorphous green powder, insoluble in water, Ether, & Chloroform, soluble in Alcohol Acetic acid, & alkalies. Like Bilirubin it is oxidized by HNO_3 with a play of colors, some of the same products being formed. The bile pigments seem derived from the blood, some haemoglobin & fibrin disappearing from blood, in it's passage through the liver. Bilirubin seems to come from haemoglobin, which is broken up in the liver. Injection into the blood, of fluids causing solution of the colored corpuscles & so setting free haemoglobin has been found to cause appearance of bile pigments in the urine.

Cholesterin Cholesterin, is very wide spread in the body, especially abundant in the centro-spinal axis, & nerves. It is formed in the blood, & is excreted in the bile.

In the bile it is kept in solution by the soaps & biliary acids (thin solids). It occurs also in biliary calculi & various morbid products of the body. It is best prepared from biliary calculi. A powdered & pale calculus should be boiled for some hours + alcohol + potash solution, allowed to cool & filtered. Wash the crystalline mass left with cold alcohol & then with water, purify by dissolving in boiling Ether, adding to this ½ of its volume of alcohol & putting aside the solution to evaporate spontaneously when crystals of Cholesterin appear (Chol.) Cholesterin ($C_{26}H_{44}O$) is a monatomic alcohol, of series $C_n H_{2n-8}$, & is the only free alcohol occurring in the body. It is a fatty substance insoluble in cold water, dilute acids, & alkalies & alcohol, but soluble in much boiling water, Acetic acid, Alcohol or Glycerin, readily soluble in Ether, Chloroform, Benzol, & soaps & salts of biliary acids. It crystallizes both with & without water. At a high temperature it volatilizes, when boiled + HNO_3 it yields oxidation products. The usual crystals of Cholesterin are long thin transparent rhombic tables, but from a mixture of alcohol + Ether it evaporates in monoclinic prisms or large plates.

it becomes often important to detect the presence of bile in other fluids of the body, notably in the urine & for this the characteristic reactions of the biliary acids & biliary pigments are sufficient. Cholesterin can be recognized if necessary by separating it (to do which from the bile is much more complicated than from the separation from ~~the~~ calculi & need not be entered into here) recognizing the form of its crystals under the microscope & then mixing them with a little sulphuric acid diluted + 1/5-vol of water & heating gently a ~~deep~~ red color is produced (Cloake).

Test for the biliary acids — Pettenkofer's.

For the biliary acids a test first proposed by Pettenkofer is used. Certain other organic substances give this reaction but ~~it~~ not many of them are apt to occur in the fluids in which bile is to be expected, & at any rate by recourse to the spectroscope the question may be settled for ~~a moderately~~ & characteristic absorption spectra are furnished by the bile acids. Where great accuracy is required however, it is probably best to separate the biliary acids & then apply the test to them. Pettenkofer's test depends on the production from the biliary acids by the action of sulphuric acid & sugar of a beautiful purple red color,

ing to purple. L. C. Wooster recommends the following manner of applying it, as being delicate & satisfactory. As it depends on the coloration of the froth produced by shaking a fluid containing bile he suggests adding to the liquid ~~in a test tube~~ to be tested in a test tube a little mucilage of gum arabic with. Add then a few drops of a solution of sugar, & shake vigorously until a deep layer of froth has formed, a few drops of sulphuric acid are now allowed to trickle down ~~the~~ it, when a beautiful violet or purple coloration makes its appearance either at once or after the tube has been gently warmed. The test may be also applied by simply adding sugar & then sulphuric acid to the fluid in a test tube.

Gmelin's test for the biliary pigments.

For the biliary pigments Gmelin's test is used. It is simplest applied, by spreading a drop of the liquid to be tested (which should be dilute) on a porcelain plate, & adding a drop of fuming nitric acid, when a beautiful play of colors, passing through, green, blue, violet, red, & finally yellow, will appear.

Pathology of the bile.

In diseased conditions, the bile is altered, both in amount & in composition.

In the beginning of fevers, the total amount is probably diminished, in obstructive diseases, ~~of the circulation~~ blood flow from the liver, the solids are increased, in inflammatory exudative affections (e.g. Pneumonia) they are diminished.

In some diseases as Typhus fever, the serum is partly increased & the bile is almost wholly serum. Biliary acids and pigments are diminished in Typhoid fever & in fatty degeneration of the liver may disappear. Pigments are largely increased in Jaundice. Fat may be precipitated & appear in balls in diseases like Tuberculosis. Also abnormal constituents may appear in disease, as Albumen in Bright's Disease, & in fatty degeneration of liver & after injection of water into veins, Urea in Bright's. Dextrin Sugar & glycogen in Diabetes &c.

In diseases obstructing the flow of bile or when it is excessively produced, Cholesterin may be deposited in crystals.

The amount of bile, but chiefly its water is increased by certain medicines, Calomel Podophyllin, Rhubarb &c. (Scott, Rutherford Pörbig)

Biliary calculi are masses, consisting most frequently of Cholesterin, Bilirubin, Biliverdin & Carbonate of Calcium.

Biliary calculi (bile stones)

the darker, are mainly bilirubin, while the paler & more crystalline are mainly cholesterin. They are of all sizes up to a inch & of ~~varied~~ more or less rounded or polyhedral shape & their number varies, as many as 7000 being said to have been found in a gall bladder (Otto).

They are formed by the deposition in an insoluble state of their various constituents around particles of mucus, epithelium &c.

Functions of the bile.

There now remains for us to consider the functions of the bile.

These are ~~various~~ apparently various. Some of its constituents seem to be excreted entirely others partly reabsorbed. The mucus, cholesterin &c. are entirely excreted, the greater portion of the acids is reabsorbed & reoxidized, while the rest is excreted, ~~partly~~ the pigments are partially reabsorbed & partially excreted. The bile seems to have a stimulant action on the intestine, ~~acting~~ as a gentle purgative, by stimulating peristalsis, ~~favoring~~ discharge of the faeces.

Again the liquid & fatty constituents appear to moisten & lubricate the faeces, the discharges in case of a biliary fistula or during a jaundiced condition, being hard, friable & with difficulty gotten rid of.

The bile seems to have considerable antiseptic property & faeces in which it is not present have a horribly fetid odor. It does not seem to be aseptic, for bacteria are found in the faeces but it probably prevents, the occurrence of fermentations of certain sorts, (Geo).
It has been found that bile has some power of emulsifying fats & possibly (in some animals at least) of changing starch into sugar & it dissolves fats (with emulsification) in the presence of the pancreatic fluid. It has also been shown that, osmosis of emulsified fats, takes place much more readily through a membrane moistened with bile, for instance in chyle containing normally 3.2 p.c. of fats, the proportion falls to 0.2 p.c. if the supply of bile to the intestine is cut off. (Cloetz).
Lastly as the strongly acid chyme, comes into the duodenum, it meets, with the alkaline bile, the HCl of the gastric juice is neutralized, the peptone (& albumoses) & parapeptone, & pepsin ~~& biliary acids~~ are precipitated en masse & the alkaline pancreatic juice is enabled to do its work, which would be ~~seriously~~ impossible in the

presence of the strongly acid gastric juice. We have now gone over briefly the most important points with regard to the biliary secretion. Unfortunately for the importance of the subject, our knowledge in regard to it is limited & not very definite. There is much to be done, but let us hope that in time, we may gain more knowledge of this, as well as of other processes of animal chemistry which are to us of such vital importance. How much we may be permitted to learn, we know not, but let us not let this deter us, from earnest efforts in research.

Chas. Lewis Allen.

23 pages

Thesis

Subject – Exodical hyperacilitic [illegible]

J. B. Ford.

21 p.

This disease may be defined as an affection characterized by frequent attacks of acute [illegible] complicated with asthma. It is known [illegible] but the recent researches into its pathology have caused a rechristening [illegible] appear as [illegible] which [illegible] explain [illegible] be [illegible] present.

Etiology — Since the early part of the present century many theories have been advanced to explain the peculiar periodicity of the attacks. Up to the year 1876 [illegible] due to that already known nearly all

observers agreeing that the pollen of flowers & grasses was the sole cause of the annoying sneezing malady.

Dr Daly of Pittsburgh, Dr of Rochester & Safous of Philadelphia were over our knowledge of the normal pathology & their knowledge had led to methods resulting in radical cure as will appear hereafter. Three seperate & distinct conditions are the pillars upon which the superstructure of Hay Fever is found to be founded. Combined they produce all of its symptoms, eliminate one of them and it disappears. These factors are:

1. An external irritant
2. A predisposition on the part of the nervous system to become influenced

by this irritant.

3. A hyperaesthetic area connecting the first two conditions

The first An external irritant it will be a comparatively easy matter to demonstrate, it being so evident. but any of the localities which give immunity from the attacks ▽ we find hundreds of sufferers who tell us that at some particular season of the year corresponding to a certain development

[illegible]

a place where [illegible]

o. where their particular enemy does not thrive. In one case this will be the pollen of roses, another the emana-

tions from ragweed, pollen from grasses, cereals & plants in general, also cinders, smoke, summer heat, sunlight & in some cases ipecacuanha, sulphur etc etc. It is noticed that many can predict the exact day at which the onset will appear & this accords with the known fact that [illegible] of plant [illegible] go certain phases of their growth each year recurring [illegible] almost [illegible] [illegible] night [illegible] [illegible] being [illegible] [illegible] (i.e. against this reasoning it has been observed that dust is one of the most com-

more irritants, which would at first
[illegible] negative [illegible] "[illegible]",
reality however it simply strengthens
the cure. The term dust while usually
considered as meaning minutely divided particles
of earthy material covers an agglomer-
[illegible] of matter consisting to quite [illegible]
[illegible] of [illegible] and many
other ingredients & in this way it simply
[illegible] for [illegible] of [illegible] explain-
ing the comparative rarity of [illegible]
[illegible] complete [illegible] of
the disease. It is also well known that
certain druggists have been compelled
to retire from [illegible] [illegible]
[illegible] for [illegible] of ipe-
cacuanha or sulphur & an [illegible]

[illegible] fact that [illegible] that seamen at sea have had immunity until [illegible] have [illegible] attacks from their home. The second factor, the [illegible] of the Nervous System to [illegible] influenced by the environment, has been discovered by a careful observation of [illegible] cases. Let us take forty cases reported by Sabous and inquire into the family history of each of these. Only [illegible] had [illegible] influence the present. A exact history of [illegible] forty two [illegible] asthmatic relatives, this would indicate an inherited predisposition to the affection, many [illegible] and taking [illegible] of the [illegible]

cident to childhood all having a mark-
ed neurotic element namely. Whooping
cough, croup, scarlet fever measles
chicken-pox. Whereas we find that
out of the forty cases sixty percent
have had at least four, eighty two
percent four, ninety percent at least
three none were exempt. This is
certainly not a mere coincidence
the number of cases precluding that
possibility. In Whooping cough all
the affections sided the neurotic ele-
ment to the end [illegible], both
[illegible] separate [illegible]
[illegible] are involved in its early stages
[illegible] separate [illegible]
[illegible] the [illegible] cause of

[illegible] are established indicating a primary nervous element as a predisposing cause, while its universal presence in forty cases [illegible] point to a common epidemic cause for both — an atmospheric miasm [illegible] upon which the contagion or element of contagion acts with effect. The limits of this paper forbid bringing forth but a few of the many facts in support of this fact but a full enumeration of facts [illegible] will establish the fact that influences have [illegible] upon the system whereby they have lost a certain amount of the force which should [illegible] [illegible] the theory that [illegible]

a certain power of resistance which must be overcome before they "explode" their force it may be presumed that in hay fever subjects the power of resistance is so lowered that there is a response to the stimulus of the irritant which in a normal condition of these cells would have no effect. The effect of such diseases as tetanus, spermatorrhea, the action of certain drugs [illegible] under the head of motor excitants, may be explained this way and perhaps this is the explanation of the production of [illegible] condition [illegible]

disease be absent & to complete the vicious circle it is necessary that there be a counter irritant [illegible] the irritant produces an impression upon the centre. Graphity treatment has demonstrated this, so long as it was overlooked the disease remained unconquered now that its importance is understood the chances of cure are greater than in any other chronic affection of the nose. It comes from the [illegible] of Hack of [illegible] [illegible] enzie of this city and others that exhibit cures [illegible] he more when irritated you [illegible] to [illegible] [illegible] area may be healed, [illegible] the [illegible] and [illegible] inferior [illegible]

ed bone first pointed out by Mackenzie, a second ~~another~~ at the anterior end of the same bone and a third in the anterior portion of the nasal cavity near the angle forming the anterior boundary of the vestibule located on nasal wall septum. A paroxysm may be produced by irritating these areas in persons subject to them, and certain other interesting points in connection with them will be pointed out under the head of Treatment.

Pathology — The respiratory portion of the nasal cavity is alone involved, the olfactory portion taking no part in the pathological condition. A careful examination [illegible] will

probably neural and inflammatory condition at or near the hyperaesthetic areas & where this is not evident by this method it must be considered as being present although we may not be able to detect it. It has been noticed that in the sensitive condition of the posterior area cough & asthma are prominent symptoms, it is easily [illegible] these symptoms under the full nasal conditions, this area is supplied by several branches from the spheno-palatine ganglion which pass through the spheno-palatine foramen. Besides its motor & sensory roots this ganglion however is sympathetic root derived from the carotid plexus through

the Vidian thus connecting the nasal sympathetic system. In the function of the cilia epithelium of the external nose the influence is transmitted over the inferior palatine ganglion to the carotid plexus this is closely connected with the posterior pulmonary plexus formed by the sympathetic of pneumogastric so that we are enabled to make out an unbroken path from the posterior sensitive area in the nasal cavity to the ultimate bronchioles of the lungs in planning the cilia-lined epithelium. The very changeable feeling at the top of the nasal is explained by the fact that these pathways have several branches

anterior area is supplied by the nasal nerve one of the principal branches of the third division of the fifth pair, the nerve from which it [illegible] ce, in [illegible] of the [illegible] tribut

and the fact that the opthalmic is a sensitive nerve explains the vari- [illegible] as lachrymation, [illegible]

Symptoms — The attacks [illegible]

days duration comparatively mild.
to a violent form causing the pa
tient great suffering. In a case
which I had the opportunity of to
serving during the past summer the
patient would awake in the morning
[illegible] comfortable, as soon
as he arose a sneeze would mark
the onset of an attack — I have known
this party to sneeze some forty or
fifty times before leaving his room,
he would then [illegible]
face of a typical case, conjunctiva
injected, nose so obstructed as to
render breathing through [illegible]
necessary [illegible]
[illegible]

and facial. pruritis, the succeeding night an asthmatic attack would usually co [illegible] for the period of the attacks very [illegible]. As a rule [illegible] predict the day of the onset as here before mentioned although premonitory symptoms are present only in a small proportion of cases. Occasionally it manifests itself twice per year.

Curative treatment — The most [illegible] should first be carefully [illegible] of any [illegible] [illegible] for present of [illegible] [illegible], bringing the patient to as nearly a normal condition as possible.

and the hyperaesthesia. In a large

galvanic

or some of the caustic acids. In us-

ing the cautery it is necessary to

loose be not moved, the scurf is
made & the superficial nerve filaments
are destroyed, if white heat is ne-
cessary
they can transmit the impression.

heat less so. In this way at
membrane is gone over until there
remains no portion of it which up-
on irritation will give rise to the re-
[illegible]. The treat-
ment should be applied several mo-
[illegible]
with a [illegible]
[illegible] satisfactory

results will be secured. Should a cautery not be in the possession of the physician the use of glacial acetic acid under not by means of a special instrument the application can be made without injuring any part but that to which efforts are directed. The objections [illegible] [illegible] [illegible] [illegible] the cautery [illegible]. [illegible] a large number of cases in which [illegible] interference will not be [illegible] which we are obliged to resort to

Palliative Treatment. -- We direct our efforts at one or all of the causes heretofore considered and in many cases considerable relief can be obtained

several weeks before the attack [illegible] [illegible] tonic treatment may be begun. [illegible] [illegible] [illegible] [illegible], [illegible] [illegible]. [illegible] [illegible] [illegible] [illegible] but [illegible] [illegible] with a [illegible] [illegible] [illegible] [illegible] followed by [illegible] [illegible] through [illegible]. Locally tablets of cocaine, chlorate of borax or bicarbonate of soda. [illegible] to the [illegible], [illegible] of belladonna or equal parts of [illegible] oil [illegible] of [illegible] [illegible] ~~[illegible]~~ [illegible] often very soothing. For the eyes two drachms of spirits of nitrous ether in six ounces of water, & the asthma may be controlled by iodide of potassium and tincture of belladonna suspended in syrup of orange peel. [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] may be [illegible] some of the principal [illegible] [illegible] with the [illegible].

21 figs

Anaesthetics.

E K Ballard

45 p.

Anaesthetics

Previous to the introduction of modern anaesthetics, many agents and means were employed from time to time to annul the sensation of pain during surgical operations. History proves that such relief has been sought even since the beginning of medical art. Among the drugs tried in that early period, we find that Homer mentions the use of "nepenthe". Herodotus states that a certain kind of hemp was employed by the Scythians as an inhalation, to mitigate pain. Dioscorides and Pliny mention

mandragora which was also extensively used by Hugo de Lucca in the 13th century.

For the endurance of slight and brief operations, the sudden elevation of the patient from the recumbent to an upright position sometimes produced a degree of anaesthesia.

But all of these means were at best only palliative, and very unsatisfactory, both to operator and patient, who must submit with Spartan fortitude or be firmly bound to endure intense suffering. But in addition to this the danger from death by surgical shock was

extremely great.

In 1800, Sir Humphrey Davy experimented with nitrous oxide gas and discovered its anaesthetic effects. His suggestion was not acted upon for nearly 50 years. His attention was drawn to the subject by a theory which proclaimed this gas to be "the principle of contagion" and productive of "most terrible effects" if even the slightest amount were inhaled, or applied to the tissues of the body.

Similar anaesthetic properties of the vapor of sulphuric ether were demonstrated by other observers, but not until 1844 were any practi-

tical uses made of either.
In that year Dr. Wells of Hartford Conn. underwent the extraction of a tooth while subjected to the influence of nitrous oxide. He anticipated very satisfactory results from its further application, but after an unfortunate failure in a subsequent case abandoned it.
In 1846 Dr Morton of Boston, employed ether in his dental practice and upon proving its success in this field, administered it in serious operations. From this time its reputation was established, and its use became general both here, and in Europe,

In 1847, Sir Jas. Y. Simpson announced his discovery of the similar virtues of chloroform, which, after his recommendation superseded ether, and is still more largely used in Great Britain than in this country where ether still retains its supremacy.

The most commonly employed general anaesthetics are sulphuric ether, chloroform, bromide of ethyl and nitrous oxide gas.

As a local agent the recently discovered anaesthetic, hydrochlorate of cocaine has rendered it invaluable for certain kinds of work especially in opthalmic practice, and in operations on mucous

membranes. For sections involving deeper structures, partial success has been attained with it by making deep injections into, but to be removed.

Recently a most interesting consultation of the leg was done under its influence, which will probably enlarge its scope.

The blood having been previously forced from the limb by an Esmarch bandage, and injections of a solution of hydrochlorate of cocaine made, the patient's leg was removed, he himself being a spectator, and yet feeling no pain!

Under certain circumstances,

each of the above mentioned drugs possesses individual advantages. For most purposes Ether is preferred by the majority of surgeons, being considered safer because not so apt to paralyze the cardiac and respiratory centres. A certain number, who employ chloroform almost exclusively, and who have met with no bad results, hold that it is usually as safe an agent in careful watchful hands.

Ether is more irritating to the air passages than chloroform and therefore not so pleasant to inhale, and its effects are less rapid.

The vapor of Ether is explosive, and Chloroform must be used at night and during operations requiring employment of the actual cautery.

Much has been written to sustain the relative merits and demerits of Ether and Chloroform, and advocates of each side hold extreme views, while non extremists consider the claims of both.

The first operation to test the efficacy of Chloroform was appointed to be performed before a class of students. While waiting for the renowned discoverer of Chloroform, who was to have administered it,

the surgeon to illustrate the plan of procedure drew the back of his knife across the salients thus in the direction of the future incision. Attention being called to the patient by some movement it was discovered that he had died, — not from the effects of chloroform as announced by its adversaries and at first believed by those unacquainted with the truth — but as the result of shock caused by fright. To entirely exonerate chloroform, it was found that Sir Jas. Simpson was prevented from attending, and the newly discovered chlor-

-oform had not been used.
Many of the reported deaths from chloroform, and other anaesthetics are probably due to shock, or to the inattention, or ignorance of the assistant in charge of their administration, and not to the narcotic powers of the drugs, which are most potent in their action, and whose effects must be closely and skillfully watched. A death from anaesthesia whether preventable or not is probably more severely judged by the public than one from other medicinal abuse, or accident as it happens under exciting and tragic circumstances, which

give it more sensational prominence. Bromide of ethyl is a most valuable anaesthetic in its proper sphere. Its career was abruptly checked soon after its introduction in consequence of several fatal cases caused by its too prolonged administration, and in some cities it has been practically abandoned.

Other renewed trials Prof. Wilson has found that it only induced until anaesthesia is fully induced, and then removed its effects are safe and all that could be desired in cases suited to its short anaesthetic period.

In certain instances anaesthesia and operation have both been successfully completed in one minute, the patient awakening from its influence without vomiting or other unpleasant symptoms, except perhaps slight confusion of ideas.

Nitrous oxide is exclusively employed in dental surgery. When inhaled in small amount, it produces abnormal hilarity and hence is popularly styled "laughing gas".

Under a pressure of two atmospheres its ordinarily short effects can be prolonged to

any required extent, but in order to fulfil this condition, a special and expensive apparatus is required.

The method of administering all anaesthetics is essentially the same, though somewhat modified in each individual case.

Complicated forms of inhalers have been invented for giving ether, and chloroform, by means of which the strength of the vapor can be regulated.

A simple and efficacious inhaler can be made from a large sponge in which a concavity has been formed.

A towel folded into a cone is also good. When chloroform is to be administered an opening must be left in the apex for free admission of air. For ether this is unnecessary as it is given in more concentrated state. The base of the cone must not touch the patients face else the skin will be irritated. To avoid this the towel should not be grasped, but the fingers held under the edge. In the absence of a specially formed cup for containing bromide of ethyl, a sheet of paper may be laid between the folds of the towel cone, and this sub-

stituted for a cup. Only about a drachm (ʒi) should be employed at an inhalation.

For the administration of nitrous oxide, more complicated apparatus is needed, and consists of a strong metallic cylinder into which large quantities of the gas are forced under a high pressure. When required, a sufficient amount is drawn into a rubber bag, and inhaled through a shield fitting over the nose and mouth.

Before going under the influence of an anaesthetic, it is advisable that the patient should have

abstained from eating for several hours. This will prevent the stomach from being overfilled, and two objects are thus gained: much subsequent nausea and vomiting is prevented and the action of the diaphram is unhampered by passive obstruction.

It is well to administer an ounce or two of brandy, or whisky before proceeding; in any event it can do no harm, and may sustain the patients' vitality in the event of shock or other complication.

When an operation is to be of

prolonged duration, it is expedient to give a hypodermic injection of morphia. The anaesthetic being sustained in its effects by the former. The throat, chest, and abdomen must be kept free from pressure, so that respiration can be maintained with the least possible difficulty.

It is the duty of the assistant superintending the inhalation to give his undivided attention to these details, and to constantly watch the condition of his patients' respiration and circulation. Remove artificial teeth.

The first physiological action

produced by ether or chloroform is an irritation of the respiratory tract, causing reflex cough and swallowing. The patient believes he will suffocate, and endeavors to push the inhaler aside. This sensibility is soon overcome and the stage of cerebral intoxication follows, continuing for a longer or shorter period according to the patients' temperament. During this stage he will generally cry, talk, sing, or perhaps reveal his moral nature by swearing, or more seldom, by praying. At this time sensibility to pain is diminished, and the reflexes

of taste and smell are lost. Then complete insensibility supervenes, preceded by a tetanic, convulsive stage, during which many make the most violent struggles, and often require to be held down to the operating table by several assistants. The breathing is stifled and the face flushed. These unpleasant symptoms soon disappear: respiration becomes slower and tranquil, complete muscular relaxation, and abolishment of all but the vital reflexes ensues. Unless the narcosis be pushed so as to suspend their action, this state can be maintained for hours.

The immediate cause of death as a result of anaesthesia is from paralysis of the respiratory muscles, or of the heart. Occasionally there may occur a case of true idiosyncrasy, but except in such rare instances, the inhalation may be conducted so carefully, as to be almost free from danger.

Where the heart seems about to fail, the vapor should immediately be withdrawn, the patient inverted, and hypodermic injections of stimulants given.

Should respiration cease, lower the patient's head, and practice artificial respiration.

When the patient becomes pale, and sweaty, it is an indication of a threatening emesis, and his head should immediately be turned aside to prevent foreign substances from falling into the larynx and trachea.

Stertorous breathing may be arrested by pressing the chin far away from the sternum, to allow free access of air to the lungs, otherwise the patient will be asphyxiated.

Anaesthetics are especially dangerous to subjects suffering from tumors, etc in the brain; or obstructive growths about the throat: to those with emphyzema, or

weak and fatty hearts. Valvular lesions do not contraindicate their use. Old drunkards are peculiarly susceptible to their influence, as indeed to any impression on the system.

Never administer anaesthetics to patients in the upright position, as there is danger from syncope.

A condition of incomplete anaesthesia is always dangerous, as shock is apt to be caused by manipulation when reflex function is not entirely abolished. In consideration of this law, it is well to remember that reflex sensibility is not destroyed in all regions at the

same time, and the safe performance of some operations requires a much profounder degree of narcotism than that for others. In many instances a state of perfect consciousness might be more favorable, as then the will could counteract some of the injurious effects upon the nervous system. The primary object of anaesthetics was to destroy the pain of surgery, but they have been applied in many conditions of disease with happy results, and in obstetrical practice they enjoy a high reputation in combatting certain complications with entire success.

Thanks to their most blessed

influence over pain, injured and diseased sufferers can anticipate instrumental relief with composure instead of horrible apprehension as in former and not very distant years.

All left to be desired is, that in the rapid progress of the age, some new anaesthetic will be discovered, which will be entirely free from danger and unattended by any disagreeable features.

Baltimore. April 12th 1886.

Ed. F. Trowbridge
Febr. 1st 1895.

Blood

Thesis for Graduation in Medicine.

In speaking of the blood we refer to it as a fluid, inasmuch as it is potentially & essentially a fluid, but when examined microscopically it is found to be composed of a fluid — the Plasma — which is actually and potentially a fluid — and the corpuscles et cætera, which are actually and potentially a ~~fluid~~ solid. As with solid and fluid, we speak of [illegible]

Blood circulating in veins, is [illegible] separated [illegible] veins as it is not [illegible] essentially. We can therefore understand how substances circulating in

the body is hot and fluid, but on being cooled from its natural channels becomes solid.

An essential law of nature is that everything which organs must take on nutrition and nutriment must ~~have an~~ ~~was secure that~~ originally essentially be solid and liquid. Since it is true that these substances taken into the system are differentiated into the various organs and structures of the body, it follows from this, in part at least, that man must have a natural source of heat; thus natural heat must belong to many parts of the organism.

Man must provide nutriment for the body within the confines of his country, this is accomplished by the various organs of digestion, heart. Plants receive their supply from heat, earth, air, water, the sun, the salivary glands, stomach &c. supplying

heat and absorbable materials. For this reason the human excrementitious matter, man, on the contrary, as above stated, has the excreting apparatus within himself; and for this reason requires an absorber which shall carry the products intended for nutrition to the various viscera and bring away from them all that is eliminated as waste product. In fact, in the blood vessels, the excrement and the nutriment are in the same channel, and this without interference with one another. The blood is therefore the ultimate nutritive element of the body. This explains why the blood diminishes in quantity and quality when no food is taken, and vice-versa.

2 Blood is one of the four vehicles of the body without direct nervous influence, though, of course, it is supply to an organ or part is regulated by and under the influence of the nervous

x) And it may be that what is given in an effete matter from one organ may be required in a given necessary for the nutrition of some other.

The nutrition of the body is an accident and is essential in order to maintain life, and in proportion as nutrition is most active death is the result of a large quantity in the great source of nutrition — Blood.

For proper nutrition by giving blood through the blood vessels should be in a constant and rapid stream, and not only this, it should be susceptible of both local and general modifications.

It is most highly organized and abounds with animal constituents, and involves, sanitary considerations and constant purification by removal of effete matter.

Difficult regarding the absolute quantity in man is nothing definite can be said, as this differs in different people and in the same individual at various times depending more or less on the condition of the body.

All attempts to find out the quantity in a man's body have failed on account of the impossibility of discharging the blood even in sections of the large arteries and no means exist to enable one to determine the remaining quantity in the body.

The condition of the vessels should enter into consideration, which has a condition of a retarded or abnormal circulation or stasis.

Collen. Inasmuch as limited by quantity to one twentieth (1/20) the weight of the body. (Wagman at congressitates.), Laborillère, however, in a very elaborate experiment, computed it to be (illegible)

Blood varies from one-ninth to a third. In man and the mammalia it is the most accurate index of the organization and degree of life in the organism. Between the mammalia and reptiles in composition and organization it is little lower. Lamprey gives it as one thirteenth the weight of the body. It has a faint characteristic odor which may be recognized by the adept in post-mortem diagnosis. Statistics have given an odor peculiar to the animal from which it was taken, it is said, can be detected.

Blood is generally described as Plasma, which is clear, in which are suspended red and white corpuscles. Lately attention has been called to a third element. When seen in vitro it is a red fluid contained in fibrins and the living tissue is

nourished by blood oozing through the walls of the vessels and bathing the tissues of surrounding tissue with it. (In speaking of blood here I mean the nutritive constituents of the blood.

The office of the blood-vessels is to keep the blood in a constant stream and retain the red corpuscles within the blood-vessels.

Blood when examined is found to be opaque and this is not because the component parts are not clear, for the plasma is clear, and the corpuscles are nearly transparent, but under examination it is found that they are of different refractive powers.

The normal temperature is from 98° to 100° Fahr., but varies in different parts of the same body independent of the cooling effects of atmospheric exposure. Demonstrations

1st, That blood is [illegible]

in the veins with a few exceptions.

2d It is warmer in the right side than on the left side of the heart.

3° It is generally warmer in the Portal vein than in the Abdominal Aorta independent of digestion.

4th It is constantly warmer in the Hepatic than in the Portal vein where he found the temperat. to range from 101° — 107°. In the Aorta it ranged from 99° — 105°.

Specific Gravity of defibrinated blood according to Bennett ranged from 1055 to 1063 and this was also less in the female.

Color is due the condition of the red corpuscles. In the arteries it is a bright color — scarlet red — but in the veins it varies with the part of the body from bright red to a bluish-black. The change from black to red takes place in the lungs, and is due to absorption

of Oxygen by red corpuscles. In the Renal veins it is red in contradistinction with the black of the venae cavae. Bernard makes this statement, adding afterwards that this red color in renal veins only existed during the activity of the kidneys. Disease has also a marked effect on the color of the blood, the venous blood of disease blood is quite, in some cases, as red as Hepatic or renal venous blood, in different organs and even in different parts of the same organ we find disparity in the color.

Shake blood of Oxygen and it becomes black. Add O and it gets bright scarlet red, add a solution of Sulphuric Ether and it will remain red, but the color is not that of arterial blood, yielding Carbon surrounded or engrossed [illegible]

chemical one. The darker the color the less the O. Therefore arterial blood which contains so much O maintains its bright red color. In anemia in cutaneous, [illegible] tissues, increases the quality of the red corpuscles.

The tissues contain and its secretion also. Blood is never acid, it is occasionally semi-[illegible] alkaline transversal, but it is never even neutral in the living tissues. Should it ever reach this stage death is inevitable (not is equal that just before death from exposure [illegible] time [illegible] is [illegible]) As the alkalinity is lessened the other tissues supply its place. This varying degree of alkalinity is only within certain limits.

Red corpuscles give color to the blood. They are organic nitrogenized elements in combination with inorganic elements and

occasionally with a little fatty matter. Like all other organic components they undergo and are capable of self-generation. They constitute one half the bulk of the blood and are slightly more numerous in men than in females. It has been computed that in 1 c.m.m. there are 5,000,000 in the male and slightly less in the female. They make up one [illegible] of the blood. *omission of bear the They proportion of 1-300 or 1/00 white after a long fast decrease to 1 in 800, or 1000. Milne Edwards speaks of Granules or Globulines and Kölliker calls them Elementary Granules. They are of undetermined value and constancy some authors doubting their existence.

In form, the Red Corpuscles are flattened [illegible] thickness from 1/4 to 1/3 their diameter. Their consistence is not much greater than that of Plasma. They are elastic and if de-

* The [illegible] on taking [illegible]

[illegible] by pressure, will rapidly assume their original shape on its removal. Urine [illegible] their appearance and size, making them a great deal smaller. In some of the [illegible] [illegible]

[illegible]

[illegible] Corpuscles [illegible]

[illegible] of [illegible] [illegible].

[illegible] C[illegible] [illegible] containing Plasma. When examined under the Microscope, [illegible] present their flat surface [illegible] a shaded centre [illegible] the edges brought into focus, [illegible] centre is focussed [illegible] the edges are shaded; [illegible] that there is a nucleus, [illegible] it is an Optical illusion. [illegible]

[illegible]

(1) [illegible]

When examined by transmitted light they are transparent & of a pale amber color. [illegible] that they present a reddish hue. [illegible] peculiar brilliancy [illegible] themselves into the [illegible] substance which is poured out & causes them to adhere & this by their flat surfaces. This is a post-mortem change, and another phenomenon after death is that small nodular projections are found on borders & if allowed to stand they assume a stellate appearance. [illegible] if a fluid of the [illegible] so [illegible] is added to them [illegible] original shape.

Mode of Nutrition is the same as other Cartilaginous growths, [illegible] in, [illegible] blood-vessels, and when destroyed or removed in large quantities they are gradually restored till they reach

their normal standard.

Chemical analyses unpublished in

of Nil

This much can be said, we must consider them as normal data, & consider a [illegible] without [illegible] contaminating salts. Globuline is a semi-solid substance, coagulated at 212° F. & recovered after Albumen. In the Human Spleen it found. Cornuola differs from Plasma by its coagulation & [illegible] & [illegible] contain Albumen & Fibrin. The corpuscles contain Potassium & phos. [illegible] in greatest abundance within the Nil. Plasma Sodium & Chloride predominate.

As to origin of these Corpuscles authors differ again widely.

Foster says as follows —

1st. The metamorphosis of certain mesoblastic cells in the mesoderm area,

2nd. By division of the nucleus in the yolk,

3rd. In a somewhat later stage by the transformation of nucleated white corpuscles which probably arise in the liver and spleen and pass thence into the blood. The cell substance becomes impregnated with Haemoglobin, and the nucleus [illegible] and disappears.

4th. By direct transformation of the protoplasm of differentiated connective tissue corpuscles. The red corpuscles arising as aforesaid pass into the protoplasmic cell substance and subsequently [illegible] much after the fashion of an oil globule (Kölliker)

I just give the opinions as to the origin of their origin.

1st They appear first of all in the ovum,

[illegible] as [illegible] but [illegible] increasing [illegible] augmented blastema.

2d When fully formed they are regularly arranged anatomical elements which [illegible] same laws of growth and [illegible] waste and repair as any other tissue.

3d They generate de novo in the adult when they are diminished in quantity by Haemorrhage or other causes; in these circumstances [illegible] in the blood sanguinis by the same process [illegible] in the embryo.

A later idea and method of [illegible] which [illegible] is that they are generated in the Red marrow of the bones, as during the first years of life and during foetal life, as also during many wasting diseases when there is a large demand for new blood-formation; this red marrow is largely [illegible]

[illegible] seems to be in the [illegible] 100

that in Rachitis & Scrofula, bad diseases

producing tissues of

[illegible] in hospitals and persistent [illegible].

[illegible] connection made of Hæmo-

globin, this cannot be separated

from Hæmo. but soaking red corpuscles in

water to wash it imparts a lake color. Heat

[illegible] also disintegrate it, and probably this

is the cause of death to the individual who suf-

fers from severe burn or who has been frozen.

Hæmo-Globin is a protein in which there

is also present a small proportion of Iron, Sul-

phur & Phosphorus. It is the [illegible] value in Red Corpuscles, as they are carriers of

oxygen to the different parts of the body.

Its affinity for oxygen may almost be termed

[illegible]; so great in this power that it

will break up other compounds in which O.

is present and take it up. Carbonic acid gas

though, when once it gets the upper hand is most

difficult displace even by O. This we see in Carbonic acid gas poisoning. While it so readily takes up O. it just as readily parts with it.

In the spleen we find, as Kölliker points out, large protoplasmic cells, in which are included a number of red corpuscles; and the red corpuscles may be observed in various stages of apparent disintegration. It is probable therefore, that the spleen is the grave of worn red corpuscles. Coloring matter of the corpuscles is due to a crystalline substance known as Hæmoglobin, combined with coloring matter of Bile, which is secreted, mainly by O, and this death which is such a characteristic of animal Bile is mainly in Carnivorous & Bile in the Herbivorous class. Hæmoglobin exists as such — without O., and also in combination with O. when it is known —

as Oxy haemoglobin. This affinity for O. is not a vital but a chemical one. Iron increases the quality.

White Corpuscles are larger than the red, and exist in the blood as free masses of protoplasm and like globules with granular contents and often have one or more nuclei. Their appearance and movements are like the Amoeba. They maintain their globular shape in the vessels and have a tendency to stick to the sides and migrate through them. The contrary as we have seen, is the case with red corpuscles. The white corpuscles are so intimating that if a piece of pith is inserted in a blood vessel after a time it is seen to be filled with them, they having forced themselves into its interstices. Through the intervention of vital forces, the corpuscles, after reaching the extra-vascular area they

undergo such changes in the differentiation of Amoeboid units and structure that they become component parts of tissue.

This migration is best seen in points of inflammation in our vast numbers are seen concentrated around the opt in the blood vessels & entire vascular tissue, and there are reasons for thinking that not only the blood corpuscles and exudation corpuscles which are the common products of inflammation but even the new tissue elements which make their appearance as the result of so called "productive inflammation," are the descendants, immediate or remote of such migratory corpuscles.

Prof. Binz has shown that Quinine in large doses will prevent this migratory action, so it was inferred from the too rapid transit of white corpuscles not the seat of inflammation and consequent

degeneration, we can see how it that Quinine acts so favorably in septicæmia diseases. He also found that administered hypodermically it acts quicker and more effectually. They are composed of Proteid substance (Albumen something resembling hyposin) Lactic Extractives, Glycogen and certain inorganic salts. With regard to the third constituent, the latest observations by Dr. Kemp of the Johns Hopkins, reveal the following:

1st That a third element exists.

2d That although strong resemblances exist between the blood-plaques (as they are called), and other histological elements of the blood there is not yet sufficient evidence to establish their genetic connection, & as no proof to the contrary exists we may regard plaques as independent elements.

3° When blood is drawn they break down almost immediately this not being true with other elements of the blood.

4th Breaking down of plaques intimately connected in its true relation with formation of clot.

5th The connection between the breaking down of the plaques and coagulation of blood is not histological but chemical i.e. plaques contribute to give off a soluble something which is active in coagulation.

6th The active agent is probably fibrin ferment.

7th Fibrin is deposited histologically independent of any cellular element of the blood.

8th When clot is very [illegible] fibrin is deposited as long needle shaped, crystal like bodies.

Plasma is the liquid constituent of the blood, its sp. gr. is higher than water

and less than corpuscles; it has a slight odor is of an amber yellow shade, with the following composition.

1st Water about 90 per cent.

2d Proteids, a. Albumin, b. Sodium Album, c. The substance which forms fibrin during coagulation.

3d Creatin 1a. 4th Grape sugar in varying quantities, 5th Fats, soaps, fatty acids, cholesterin, lecithin (the fat is partly dissolved by soaps, and exist as emulsion. 6th Corpuscular particles, 7th Pigment. 8th Salts esp. Sodium Chloride & Carbonate, 9 Gases.

It is sticky, and when dry becomes hard. This is what forms the hard, sticky scabs when blood is allowed to dry on the skin.

While we have seen that the salts of Plasma are the Sodium salts, those of the corpuscles are Potassium. Why is it, two different

salts dissolved and flow through the same channels? This we can only explain by saying it is due to some inherent vital power: and later in Asiatic Cholera there is an intense change. This can be attributed to loss of vitality only. It is this fluid which carries the actual nutrition around the body. All the protoplasm of the body is bathed in it. When found in the lymphatics, it is more as Lymph.

After blood is issued from the vein for some minutes it changes its consistency, becoming less liquid and gradually thicker and till it will have assumed the shape of any vessels in which it may have been contained. Now if it is left still longer the mass hardens and shrinks up; gradually a liquid oozes out, first from the top then from the sides and finally clot — for such is the name given the mass — floats

in the serum liquid portion. Clotting is prevented or held in abeyance by cold, certain salts or by keeping it perfectly still.

When clotting has been thus prevented the corpuscles gradually fall to the bottom, if now coagulation be permitted to go on it is found that the upper portion of the blood has coagulated just as firmly as the lower stratum which contains most of the corpuscles. Plasma ~~into~~ from which all the corpuscles have been taken away is found to clot just as readily. So it is evident the red corpuscles have nothing to do with the phenomenon.

This clotting is not an act of vitality but an act of dying. And as the above will show, the agent ~~of~~ directly concerned in that act is the Plasma. The corpuscles acting only by their presence, as sand in the mortar, making the clot more firm.

(i.e. the serum) exists as such in the blood but in the effused product formed when blood is poured from its natural channels.

When the clot is examined it is found to consist of fibres, and if washed it is seen that these fibres are white. When fresh blood with alum and all the fibrin will be deposited on the twigs, the red & white corpuscles are left intact and will not coagulate.

Some of the Plasma ~~fibrin~~ is found from which blood has been drawn forms clot, the rest exudes as serum which is uncoagulable. Fluid taken from Hydrocele will not clot, but mix the Hydrocele and the Serum and coagulation ensues. This proves both that there is something contained in each which alone will not produce clots, but when brought together will. It has been found that in the serum, fibrin ogen (one of the fibrin compounds)

exists while in Hydrocell fluid. Fibrinogen is to be seen. Occasionally these two will not clot but require the presence of a third ingredient — Ferment. — Nothing definite is known of this latter, but it is supposed, as I have before stated to exist in the blood corpuscles. Clot is thus found composed of Fibrinoplastin, Fibrinogen & Fibrin ferment.

Plasma is formed of Water, Salts, Albumen, Fibrinogen and Fibrinoplastin.

The whole of the fibrinogen and part of the fibrinoplastin go to make with the corpuscles, in the presence of ferment — clot. The rest of the fibrinoplastin together with the Albumen & Water make the Serum. Serum therefore, is the Plasma less the Fibrin elements and all which was said about nutritive power of Plasma, will apply also to Serum.

Clotting does not take place while blood is in contact with normal blood vessel walls (and herein lies one of the great dangers in those diseases which affect the nutrition of artery walls, such as Syphilis.) nor does it take place when blood-

is in an atmosphere devoid of O. as in Carbon Monoxide poisoning; blood from a leech bite will also be affected the same way. Something in the mouth of the leech which makes this change. In Yellow Fever there is some change affecting blood in the same way: but on the contrary, the odor of the Gangrene will cause clotting more easily.

We see from the above how important a constituent of the body the blood is, inasmuch as one of the component parts has an important office to play in the economy which is perfectly filled by it. But important as it is the loss of a great bulk of it is borne with comparative impunity, as is constantly seen during Menstruation & in Epistaxis &c. The chief danger lying not in the quantity lost, but the ability to restore the quantity to its original status.

Finis.

Acute Simple Laryngitis.

This variety of laryngeal inflammation is often called acute catarrhal laryngitis. Laryngoscopic examination during life shows that the mucous membrane is reddened and swollen, but the congestive hyperaemia is less marked and may entirely disappear under the pressure of the abundant elastic fibres after death. Small ecchymoses are frequently observed. Serum and pus mixed with mucus constitute the inflammatory lesion. Ciliated epithelial cells do not appear in the expectoration and they

are not necessarily desquamated. The mucous glands are swollen, and through their orifices, often, little drops of muco-pus can be pressed. Pus cells are always contained in the mucous membrane and submucous tissue. The swelling of the submucous tissue varies in different cases. It is infiltrated with serum so much in severe cases as to endanger life by interfering with respiration. Sometimes erosions or even superficial ulcerations of the mucous membrane are formed. They either have their origin

from ecchymosis, or they are follicular and located in the mucous glands

Symptoms. The symptoms of acute laryngitis are intelligible when the morbid changes are considered in connection with the small size of the rima glottidis and the unyielding walls of the larynx. Simple swelling of the mucous membrane may produce more or less distressing symptoms and danger due to narrowing of the aperture of the glottis. The obstruction is increased and may prove fatal, when submucous infiltration is

ulded. The submucous in-
filtration is the chief element
of danger. This varies in vary-
ing degrees, the severity of the
local symptoms and the dan-
ger being in proportion to its
amount. But acute laryngi-
tis or a common cold may
precede the development of
this disease. The voice is at-
first hoarse and is lost, with
the development of acute in-
flammation. The cyanosis
is accompanied with a stridu-
lous cough and a small
expectoration of glaring mucus
which may be streaked with
blood. Febrile movements-

may be more or less intense or it may be wanting. The symptoms may exist without notable difficulty of breathing, provided the changes are limited to the membrane and the swelling is not great.

With a great amount of swelling together with submucous infiltration, labored respiration and dyspnoea are added. Inspiration and expiration are both affected by the obstruction, but more especially the former, owing to the fact that the infiltration is greater above the sinus where the areolar tissue is more abundant.

The respiration is stridulous and noisy. The patient complains of a sense of constriction at the larynx, or feels as if the cavity were filled with a foreign substance. Laryngeal hoarseness is the same given to the latter symptom. Deglutition is more or less frequently difficult. Cough is excited by fluids coming in contact with the epiglottis and adds to the discomfort of the patient. When spasm of the arytenoid muscles occurs the labor of breathing and dyspnoea is increased. The exacerbations of distress from obstruction are due chiefly to a

spasmodic closure. Paralysis of the abductor muscles may, in some cases, contribute to the obstruction.

In cases of acute laryngitis with great obstruction, the suffering is intense. With the unavailing effort to enlarge the aperture of the glottis, the larynx rises and falls in the act of inspiration and expiration. There are frequent efforts to cough and expectorate. The cough is dry and croupy-like, but is often hurky or abortive. The larynx is sensitive to pressure. Pitting over the pomum adami has been observed. The respiratory acts are less frequent

than in health. A deficient oxygenation and decarbonization of the blood may occur. Slight delirium may occur towards the close of the disease if it be prolonged, but the mental faculties are usually unaffected.

Pathological Characters. In simple acute laryngitis, the inflammation has no special characteristics. The severity and danger are according to the intensity or extent of the inflammation. The gravity is due to the fact that the usual result of the inflammation in this situation obstructs the passage

of air through the larynx, in consequence of the small size of the rima glottidis and the unyielding laryngeal walls. This affection was formerly embraced under the name croup.

Causation. Acute laryngitis is rare in adults. It is less rare in infants and children than after adult age. Its infrequency is remarkable in view of the frequent occurrence of inflammation of the pharynx.

Occasionally laryngitis is developed in connection with pharyngitis. It sometimes occurs in connection with the pharyngeal affections in scarlatina.

The sub-acute form is common in rubeola and some times becomes acute. Eruptions in variola in this situation simulate the acute inflammation. It is secondary under the circumstances just named. It may occur as a primary affection after exposure to cold and wet. It is suspected to be caused by excessive use of the voice, but clinical observations furnish little, beyond that such is the fact. It may be produced traumatically, by the inhalation of irritating vapors. It has been produced in children by drinking boiling water or inhaling steam into the mouth.

Diagnosis. The diagnostic characters of acute laryngeal inflammation are the loss of voice and the membranous croup, in connection with fever and other symptoms. That the labor of breathing, and dyspnoea are due to the obstruction of the larynx, is shown by the sensations of the patient, the diminished frequency of the respiratory acts, and the absence of physical signs denoting pulmonary complication. In proportion as the aperture of the glottis is narrowed the respiratory sounds will be increased and this gives a better criterion of the amount of obstruction than the suffering

of the patient. The only difficulties in diagnosis relate to the discrimination of simple acute laryngitis from laryngitis with the exudation of fibrin, from oedema of glottis and from spasm of laryngeal muscles. If a satisfactory laryngoscopic examination can be made, the diagnosis is established.

Prognosis. Acute laryngitis in the adult is a grave affection. The suffering in these cases is usually caused by spasm. These may greatly interfere with respiration and the tendency is to fatal result. Timely surgical interference may save life. The course of

the disease is rapid in fatal cases. The disease is less likely to prove fatal in the young than in adults.

Treatment. The treatment of acute laryngitis embraces general and local measures. The general measures are those designed to lessen the intensity of inflammation, promote resolution, and the diminution of serous infiltration. We may use the same remedies for this as we do for other acute inflammations. Blood letting, is to be guided by the same principles as in other inflammations. This should never be employed, if there is

fividity of secretion and pain.

The bowels should be moved efficiently by a saline cathartic. Mercurials or direct cardiac sedatives are indicated as in other inflammations. When aconitine is given it should be well diluted so as not to affect the throat. The mercurial treatment as suggested, and used by Prof. Hardy & Barker of New York. Is to use Pulv. Jalapa Mineral in from ij - iv grs doses. This is followed by brisk purgatives and certainly does good. Dr. Barker claims that since introducing in his practice this agent, the mortality of the disease

ful disease has greatly decreased. The administration of one of the mercurial chlorides, is then followed with good results. The aqueous solution is administered from the beginning, in doses that will not endanger salivation. The Bi chloride in from 1/60 - 1/30 gr. doses, seems to be followed with the best results. Always using the Hydrargyri Sub-sulphas Flavus as an emetic when the condition of the patient calls for such ~~measures~~. It may here be well to state that gr. V doses of the Tinctura minus would from an irritant-poison even is not for its prompt rejectment by the stomach.

Remedies to allay spasm and cough are indicated. Opiates may be used but should not be carried so far as to blunt the sensation of the want of breath. Belladonna is preferred to opiates, if it is found to meet the indications.

The foregoing measures may not be admissible, if the complications of vertebra, urethra and pulmonary diseases occur. This applies to depressing measures.

The local measures of treatment embrace fomentations or poultices applied to the neck. Some times compresses dipped in ice water and applied to the neck give great relief.

in the early stage of the disease it acts as an antiphlogistic and afterwards affords relief to the dyspnea. Topical applications are used. Nitrate of silver has been used and it gives temporary relief. A strong solution of it should be applied every three or four hours by means of a probe. Scarification of the parts has been advised when there is much tumefaction above the vocal cords.

When scarification proves ineffectual and death imminent tracheotomy should be employed. This operation should be performed before permanent lividity occurs.

Recovery of voice is slow after

convalescence. Acute bronchitis in children requires less vigorous treatment. Emetics may be employed to remove the viscid mucus from the bronchi.

Chronic Laryngitis.

This variety occurs more frequent- than the acute form. It- occurs without- being preceded by acute laryngitis. Neglected catarrh in those who are exposed to vicissitudes of weather is often succeeded by this affection. If acute laryngitis does not destroy life, it- terminates in recovery without becoming a chronic affection. In chronic laryngitis the inflammation rarely becomes acute. In chronic inflammation the hyperaemia is less intense than in acute laryngitis. The color of the mucous membrane

is grayish and dilated veins are often present. The surface is often granular from enlargement of the mucous glands and is covered by a mucous or purulent secretion.

The vocal cords have a glistening appearance and are grayish. There is also redness and roughness of mucous lining; thickening of sub-mucous tissue and contraction of the ligaments. Ulceration of the mucous and sub-mucous tissue and necrosis of the cartilages are also among the pathological characters.

By development of new connective tissue the mucous

and submucous tissue of the be-
come thickened and occasion-
ally pedunculated growths pro-
ject into the cavity of the larynx.
The mucous membrane is atro-
phied in some cases instead
of being hypertrophied. Ulcera-
tions are frequent in chronic laryn-
gitis and are usually due to spe-
cific causes. This affection
occurs frequently in connection
with syphilis and pulmonary
phthisis. Chronic laryngitis oc-
curs in connection with phthisis
more frequently than it does
with syphilis. Localization of
syphilis in this situation is
rare (When chronic laryngitis

occurs in connection with phthisis,

the term laryngeal phthisis has been applied to it. It has been found that in this affn. the pulmonary disease is always developed first. These ulcers are most frequently situated on the posterior surface of the larynx, just above the commissure of the vocal cords. The vocal cords occasionally be destroyed by phthisical ulceration. Ulcers are some times found on the epiglottis.

Phthisical ulcerations frequently begin above the vocal cords and syphilitic affections are usually developed in the upper portion of the larynx.

Syphilitic disease of the pharynx and base of the tongue are the most frequent causes of syphilitic laryngitis.

Laryngeal perichondritis is the name given to inflammation surrounding the laryngeal cartilages. Syphilitic or phthisical ulcers of the larynx are the most frequent cause of suppurative perichondritis.

Symptoms. Some of the symptoms of this affection are hoarseness and hacking cough, soreness of larynx, pain on local pressure or swallowing; change of voice; increase sensibility of larynx, from slight causes and

sometimes purulent expectoration.

The change of voice is one of the most characteristic symptoms. It may either become hoarse, husky or shrill and clear. There may also exist dysphonia or aphonia. The extent to which the voice is affected is not a criterion of the extent to which the vocal cords are damaged by ulceration.

Cough and expectoration vary in different cases. The character of the expectoration may be mucus, muco-purulent, mucopus. It frequently presents bloody streaks and it may be fetid. Pus and bloody streaks point to ulceration and fetor to

caries of cartilages, Phthisical
laryngitis is sometimes accompanied by paroxysms of cough
resembling those of whooping cough
and vomiting is apt to occur
during the paroxysms.
In some cases the act of swallowing is attended with no inconvenience, but in a certain proportion of cases it is a source
of great distress. The passage of
food and drink causes pain,
excites spasm of glottis, thus
causing distressing dyspnoea, and
frequently liquids are returned
through the nostrils. The
difficulty appears more at night,
and we may sometimes have

the dyspnoea increasing continually until death takes place. Patients are obliged to confine themselves to the blandest articles of diet, and these are ingested with so much difficulty by some patients that death is hastened by inanition. If food when swallowed does not come in contact with the ulcerated surface difficult deglutition will not be present.

Diagnosis. The diagnosis of chronic laryngitis is easy. Some of the principle diagnostic signs are permanent change of voice and peculiar cough, hissing breathing, and pain or

tuberculosis of the lungs or bronchi. Its connection with pulmonary phthisis is to be determined by a physical exploration of the chest, together with an examination into the previous history and symptoms. The syphilitic source of the affection must be investigated, of pulmonary disease be excluded. Idiopathic cases are rare but when syphilis and phthisis can be excluded, it may be regarded as such.

Prognosis. Prognosis of this affection in mild cases and good constitutions is favorable; but in scrofulous habits, and where we have tubercles it is un-

favorable. Its connection with phthisis does not render the latter disease more rapidly progressive, but as a rule the pulmonary affection is more slow with this complication, unless it interferes with alimentation.

Laryngitis is rarely recovered from when occurring in connection with pulmonary phthisis. In cases of tuberculous laryngitis considerable improvement may take place. When dependent on syphilis, chronic laryngitis, offers a better prospect for recovery. The voice is likely to remain permanently affected.

<u>Treatment</u>. The indications for

treatment are as follows. To subdue chronic inflammation and remove its bad effects, to relieve urgent symptoms as they arise, and to improve the general health. Rest of the lungs, and protection from irritating particles in the air. The co-existence of pulmonary phthisis indicates the treatment in the great majority of cases. Anti-syphilitic treatment is called for, namely, mercury and iodide of potassium, when the affection is caused by syphilis. Local bleeding by leeches is sometimes found beneficial. Counter-irritation with croton

oil is also of benefit. Counter-
irritation and local bleeding in
some times useful in cases of
phthisis. Injection of medicated
liquids and insufflation of
remedies in the form of powder
have been used for this pur-
pose. Both of these methods
are objectionable owing to the
difficulty of application to the
diseased parts and they are apt
to excite cough and pleurisy. The
application is best made
with a curved probang with
a piece of sponge attached to it.
The introduction of the sponge
should be made during the
act of inspiration, because

the slitis is enlarged at the

time

Topical remedies are frequently used, such as Argenti Nitras, Cupri Sulphas and Hydrargyri Chloridum Corrosivum. The use of cocaine is very useful, as in dysphagia is caused by syphilitic and tuberculous ulcerations. These remedies are applied by means of the sponge. Nitrate of silver is most frequently used in a strong solution, namely, from one to two scruples to the ounce of distilled water.

To modify disease tissue and promote absorption, the use of mercury will have to be re-

sorts to, if there are no tubercles. If mercury is used the iodine must be used.

When spasmodic cough is present the use of belladonna, camphor, ether can afford no necessary to relieve urgent symptoms.

Alterative tonics, good diet, air are necessary for the improvement of the general health.

In cases of syphilitic laryngitis extensive obstruction endangers life tracheotomy is to be resorted to. This operation is objectionable in cases of phthisis, because the tube

in the trachea offers an obstruction to free expectoration.

The laryngoscope has proven highly serviceable in the diagnosis and treatment of laryngeal affections.

F. J. Bland.

Thesis on Typhoid Fever.

by

George B. M. Bower.

February 15, 1887.

28p.

Typhoid Fever.

This malady is one of the most widely destructive of all maladies. Judging from the literature we can collect on the subject it must have existed from time immemorial. Our ancestors were just as prone to its sweeping ravages as we are now. It has the peculiarity of not limiting its existence to any class or condition of men. It visits all classes with life infinite. It is no respecter of persons, but all are alike liable to contract it. It attacks the rich as well as the poor, the ignorant as well as the learned, the inhabitants of country as well as city, the inhabitants of well ventilated houses as well as those of crowded streets, the inhabitants of malarious as well as healthy localities.

[illegible] not confined to any particular [illegible]
[illegible], it exists in the Arctic & Equatorial [illegible]
[illegible] as well as the temperate. For [illegible]
[illegible] the only predisposing cause, it is rarest
in old age, not frequent in childhood and
is most common in the middle period of
life or the period between the fifteenth and
[illegible] year. It is very [illegible] [illegible]
after the fiftieth year. This malady is the
most virulent of all diseases due to fecal
decomposition. A great many different theories
have [illegible] been advocated as to its cause.
by a great number of eminent pathologists.
[illegible] that the [illegible]
eral causes are foul air, famine, fatigue,
[illegible], unwholesome food or [illegible]
[illegible] disease cause. In some cases the

[illegible] can not be made out. It is a subject which has attracted much attention and for [illegible] years [illegible] has been between the [illegible] of the exclusive solidist and Humoral pathologists, but it has become a matter of also [illegible] recognition that [illegible] and fluids of the body are [illegible] in this malady. We are in possession of a number of cardinal ideas of [illegible] methods or opinions, but there have not been [illegible] point; but they have their proponents, their advocates, their opponents. Dr. Hunter and Nothnagel state that it is [illegible] to foul air as that of sewers, [illegible], cesspools, [illegible] of stagnant water. Dr. Budd and others believe that it is caused by specific

matter passed from the bowels of those having it and by water and air conveyed into the system of others. Contagion of this kind is very plausible. Some facts rendered in S. Paul in proof of it can hardly be explained without admitting such a mode of contagion. Dr. Parker, of London, states that it may be caused by the discharges of patients suffering from the disease getting into a well and so contaminating the drinking water and this water has on different occasions been added to milk by dairymen or that the pans had been washed with said water. Dr. Buckman states that [illegible] fungus which grows in water contaminated by sewage or otherwise will produce typhoid fever, but this is

doubted by several able authors. It is thought by some authors that it occurs only among those who are exposed to the influences of sewers, drains or foul and overcrowded places especially when these are so situated as to pour forth their fetid gases into the cities of towns, so to contaminate by their emanations, their clothing or their bedding, or food and other articles used for foods. The contagion has been contradicted by some authorities on the ground that persons who work in the sewers are never attacked but I think such persons have a immunity from the disease. It is believed by many that it may be inherited with the body and that it is thus that the effluvia of sewers and drains act as predisposing

the disease. On the whole there is reason to suspect that the virus in all cases enters the system at the surface of alimentary mucous membrane and that the extreme cases are to be regarded as foci of inoculation. Typhoid Fever may exist in sporadic and widely scattered cases or in form of epidemics. When it occurs in epidemics it is usually produced by fecal of Typhoid patients contaminating drinking water. This seems perfectly clear to my mind from personal observation in the epidemic which occurred at Plymouth, Penna a few years ago. If I remember correctly the epidemic started as follows: A person living a short distance from the town was some time previous to the epidemic attacked by Typhoid Fever. The patient was

well cared for and recovered, but his ex-
ca[illegible] time a short distance from
[illegible] near a stream of water which
supplied the town. Nothing more happen-
ed until after the next freshet when
the decomposing feces were washed into
the revoirvoir supplying the town. The con-
sequence was that the entire water supply
was infected and a general epidemic
ensued. That this was the cause of the epi-
demic is forcibly clear to me from the
fact that a small portion of the
town derived its water supply from other
and this portion entirely escaped the scourge.
sources. Typhoid fever is not in the usual
sense a contagious disease. This seems clear
from the fact that nurses and attendants
of Typhoid patients seldom contract it.

the feces of such patients seem at first [illegible] but there is supposed to exist in them latent germs which in time become highly virulent. It is not certainly known if this disease can be contracted by inhalation or touch but by most authors it is thought not to contain this power. The most common way of contracting the disease seems to be by contaminated drinking water. The feces of patients should be immediately disinfected and carefully buried. The best disinfectants are carbolic acid, condy's fluid, chloride of lime and sulphate of iron. All cesspools and drains which are at all likely to be contaminated should be thoroughly disinfected. The bed clothes should not be allowed to accumulate but should be frequently

The disease seems to be most prevalent in the [illegible] months in Feb. and March it is most rare. Person who have had one attack seem to have a certain amount of immunity, but relapses are common. The typical lesions of Typhoid Fever are inflammation of Peyers patches & solitary glands of intestines, quite intestinal disturbances and a fever such. These lesions may be divided into three stages viz: 1. Swelling and proliferation of the cellular elements of the glands. 2. Necrosis and ulceration of the glands from infiltrated, enlarged and softened, but seldom ulcerate. The spleen also becomes enlarged and softened and there is granular degeneration of all tissues of body

[illegible]:- The increase of the disintegration of the substance of the body is at present one of the most prominent and interesting phenomenon connected with fever. The whole subject however is surrounded by obscurity notwithstanding the fact that the symptomatic aspect of the febrile state have been familiar even since man became a prey to disease. At the early stage there is [illegible] fever with languor and debility, anorexia and headache for several days, bleeding at the nose and bronchial coughs [illegible] and [illegible] symptoms. The patient takes to bed, the fever is of considerable violence, the face acquires a [illegible] [illegible], the patient [illegible] long dozing usually with a low muttering

delirium, the nights are more or less wakeful and the delirium still continues there is hardness of hearing towards the end of 2nd. week, the abdomen is tender and tympanitic, the bowels are too freely moved, the stools have the appear of pea soup, the liver is normal or may [illegible] on account of [illegible], the actual amount of solid matter secreted separately by the kidneys is generally increased. It has been asserted that a close correspondence exists between the amount of urea passed in the urine and the temperature, the greater the amount of urea the more the temperature. If the urine of the patient be examined it will show that it has an excessive amount

[illegible] decomposing organic matter (ammonia, urea and carbon dioxide) There is slight fever, respiration in early morning, but with not much loss of heat. This continued increase of heat of the body being produced by excessive tissue metamorphosis under an abnormal condition of the ganglionic nerve centers, which condition is the result of destruction of either the [illegible] fibers or sympathetic irritation from the local irritation by pressure of the g[illegible] [illegible] Hunter's hypothesis of a heat inhibitory center in the cerebro-spinal axis has found much favor in Europe. About the 2nd. week there is tenderness and gurgling on pressure in right iliac fossa, the urine passed is small in quantity and of high color.

The patient is usually unable to fix the date of the commencement of his illness. During the early stages the patient suffers from irregular chills, the frequency of the pulse is increased, there is aching in the limbs, there is thirst and loss of appetite, there is morbid redness or coating of the tongue, there wakefulness and restlessness, vomiting and diarrhoea, tenderness especially in [illegible]. During the first week all the symptoms grad- [illegible] but the patient is not always obliged to take his bed. [illegible] the beginning of the second week, unless the case be exceptionally mild or [illegible], [illegible] fully developed and assume a more characteristic aspect. [illegible] reaches its acme; [illegible]

is generally hot and dry, but it is apt to break out in perspiration, the pulse and respiration increase in frequency, not unfrequently there is some cough; the tongue may be clean or coated with a moist fur, but in other conditions is apt to get dry and [illegible] at times crackes upon the dorsum, but [illegible] usually subsides, but thirst and anorexia continue, the throat may get sore and [illegible] speaking and swallowing difficult, the patient sleeps badly, [illegible] delirium comes on, especially at night and [illegible] sleeping and waking, about the period the rash which is peculiar to the [illegible] makes its appearance. The rash is present in about three fourths of all cases. It consists in lenticular, rose [illegible]

red spots distinctly elevated and sensitive to touch, disappearing on pressure, and [illegible] half-formed [illegible] a line to a line and a half in diameter. They usually rise above the general level in the form of segment of spheres but sometimes become vesicular in the [illegible] in successive crops—those of each crop [illegible] the [illegible] and disappearing in the reverse order to the [illegible]. The number of spots vary from less than dozen to more than a hundred. They are usually developed on [illegible] and face; but they are commonly found on the face and extremities. At this time catarrhal symptoms usually [illegible]

pronounced. The bowels become loose, the
usually from three to a dozen stools a day.
the stools become yellow resembling pea soup.
[illegible]
gradually recovers, but may toward the
[illegible] and week, pass into Typhoid
dition. The elevation of temperature continues,
[illegible]
dry and brown and traversed by deep fissures,
the lips and teeth are covered with sordes,
[illegible] grinding and [illegible] teeth,
[illegible] delirium [illegible]
head ache and pain cease, the diarrhoea
[illegible], the [illegible] A.M., there is
[illegible] brownness and delirium. The delir
[illegible] more [illegible], [illegible] muttering,
[illegible] in large quantities is passed

[illegible] the bowels. If the case is going on unfav-
[illegible] there are tremors, subsultus, involunta-
[illegible] of the sphincters, delirium, [illegible]
[illegible] and death follows. If the case is [illegible]
[illegible] to mild convalescence usually [illegible]
during the course of the third week. The
changes are usually quite gradual. The fever
abates, the pulse falls, the cerebral symptoms
[illegible], the tongue becomes clean, the abdo-
[illegible] softens, [illegible] and tympanites
[illegible]. Relapses sometimes occur after the
convalescence seems to be fairly established.
The symptoms of a relapse are usually less
severe than the original attack. A second
or third relapse may occur. The above is
the course of typical cases of typhoid fever
[illegible] taken, but there is no other disease

[illegible] presents so many deviations from the typical character. It may be so slight as to need careful detection, [illegible] the [illegible] is [illegible] supposed [illegible] vary with all degrees of intensity. It is usually most marked during the 2nd week. Typhoid fever presents itself in so many forms, but it is frequently confounded with other fevers, but we should bear that [illegible] of so called "infantile remittent fever", "worm fever", "gastric fever", "bilious fever", "nervous fever", "common continued fever" and "jail fever" are [illegible] of the malady but if the tongue be found on the examination which we have always its progress. The most important of these are internal hemorrhage perforation of the bowels with peritonitis, and pneumonia

bronchitis. Intestinal hemorrhage is the most frequent and may occur at almost any period of the disease, but is most common from middle or end of 2nd week to the end of the 4th. Sometimes there is a general tendency to hemorrhage, but often it is confined to ulcers or areas of the intestinal mucosa. It has no connection with the age of the patient or with the presence or absence of diarrhoea or with the mildness or severity of the patient's previous symptoms. The hemorrhage may be scanty or it may be so copious as to induce death by syncope. The escaped blood may be fluid, clotted, black or normal. Perforation is another frequent cause of death but it likewise has no relations to the

severity of the case as the diarrhoea. In the [illegible] of cases it is due to [illegible] of the bowel in the first week of the [illegible] time stage. It comes on suddenly and [illegible]. Pain also sometimes occurs in [illegible] who have never taken this disease.

Diagnosis:- Typhus fever is about the only disease which may be mistaken for Typhoid. In Typhus the eruption usually [illegible], [illegible] in Typhoid. In Typhus the rash is abundant and general, in Typhoid scanty and sparse, out in successive crops. The abdominal symptoms of Typhoid are generally absent. Typhus does not have the sequelae of [illegible] and deafness which characterise in Typhoid. Convalescence by crisis in Typhus. In Typhoid [illegible]

sequence is slow and followed by long convalescence and debility. Typhus & contagious Typhoid is not under ordinary circumstances.

Prognosis:- In hospital practice not usually more than fifteen or sixteen cases in a year and few girls. But when we consider the large number of mild cases which never enter the hospital we must conclude that the proportion of fatal cases is very much smaller. Statistics seem to show that the death rate is less below and above in late periods of life. It is also smaller when the treatment and hygienic surroundings are good. Treatment: Very simple. Low diet. Stimulants for the cure of typhoid fever, a mixed ether mixture with antiseptics

[illegible]

[illegible] and the medicines have been used with the special object of reducing temperature such as quinine in [illegible] grain doses, salicylate of soda, actual refrigeration and bleeding. The last [illegible] has fallen into disuse. Cold is the beneficial when the temperature is high. The bath is the best way to apply it. We should begin with a temperature about ten degrees below that of the body and gradually decreased until it reaches a [illegible] 78°F. Immersion should be continued for half an hour or until the patient begins to shiver, and be followed by rubbing in the wet sheet. The cold rub is to be used [illegible] and relieve symptoms as they occur.

[illegible] no circumstances must
[illegible] purgatives be used and [illegible]
[illegible] called 1 & 2. After the first [illegible]
[illegible] should be resorted to. When di-
arrhœa is present it should be restrained
[illegible] acid, lead and opium, Sulphuric acid,
compound kino powder, opium or morphia sup-
[illegible] opiate enemata. [illegible]
[illegible], if [illegible] the liver should not be
restrained, regarding it as a curative ef-
fort of nature, but [illegible] generally accepted. When hemorrhage from the
[illegible] these methods should be ex-
hausted to stop it. [illegible] good
results in turpentine, tannic acid, [illegible] and
other astringents. The hemorrhage occurring during

[illegible] for ten or twelve days is usually of little [illegible] and does not usually require treatment. For the prevention of perforation, the avoid[illegible] [illegible], the arrest of diarrhoea and the maintenance of a [illegible] of the bowels, are of extreme importance. The patient must make no movement that [illegible] any article of food that is likely [illegible] the bowels. In regard of perforation [illegible] the patient must be kept under the influence of morphia the dose being determined by the age of the patient and [illegible] effects. Tympanites may be [illegible] by the use of stimulating enemata [illegible] tation to the [illegible]. Lastly we may be [illegible] the use of lime water and milk, bismuth or ice or by counter irritation. Putrid

any complication should be guarded against by the maintenance of an equable temperature and by the avoidance of draughts. But when present must be treated on general principles. The patient should be confined to bed on account of the tendency to the retention of foul urine. The patient should take the measures to obviate and relieve pain in and if necessary a hot water bottle should be applied to surround the part with warmth and protect it from irritation. The diet should consist of fluids and easily digestible food given frequently and in small quantities. The best drinks are milk, gruel, barley water, rice water etc., but arrowroot, sago, chicken broth, beef tea and eggs are valuable. Stimulants are necessary

when there is a tendency to collapse, when typhoid symptoms are present or when there [illegible] debility. [illegible] convalescence. The long continued debility [illegible] use of tonics and plenty of good nutritious food, in spite of [illegible] it important that the bed should be [illegible] dry, quiet and not [illegible] to disturb the [illegible]. Change of air often beneficial, but [illegible] and fatigue are liable to be injurious on account of their tendency to produce pulmonary inflammation or tuberculosis.

Thesis of
J. W. Beathwick

36 p.

Lobar Pneumonia

This disease is also called Croupous or Exudative Pneumonia and is the most common of the three forms usually described.

It is an acute [illegible] affection of the lungs involving the alveoli and [illegible] [illegible] characterized by an exudation [illegible] [illegible] with the consolidation of large [illegible] [illegible] rapidly [illegible] that [illegible] [illegible] spontaneously [illegible].

Etiology. [illegible] exceeded [illegible] general disease with a marked [illegible] expression. The [illegible] [illegible] organism as the cause.

[illegible] constantly present and Koch [illegible] confirmed this presence not only in ulceration but also in the lymphatics. They are found in the [illegible]

Friedländer has succeeded [illegible] [illegible] [illegible].

The following facts go to prove [illegible] to be a complete [illegible].

It is not increased by [illegible] nor wet weather nor by the accumulation of sputum.

The general systemic [illegible] is most [illegible] in proportion to the amount of lung involved.

An initial chill is almost [illegible] [illegible] with a crisis. It also [illegible] [illegible] symptoms [illegible]

[illegible]

On the other hand, the [illegible] of functional symptoms [illegible] of a typical temperature [illegible] are. The chief [illegible] evidence by those who oppose the theory of it being a general disease.

There are many [illegible] predisposing to an attack of Pneumonia, of which the [illegible] are the principal. Exposure, particularly [illegible] and hygienic influences, a phthisical tendency, gout, rheumatism, diabetes and other influences tending to

Morbid anatomy.

The morbid process consists of three stages corresponding to the three clinical stages. In the first stage the lesions are those of congestion or engorgement; in the second stage those of consolidation or red hepatization and in the third stage there is gray hepatization.

A fourth stage of resolution may be added but it is essentially a continuation of the third stage and is the natural termination of the

pneumonic process. In the first stage there is a congestion of the pulmonary capillaries. The lining epithelium becomes enlarged and thrown off. The engorgement prevents collapse of the lung when in the air.

The vesicles remain pervious during the entire stage but there is a deposit of fibrin upon their walls and they also contain pus cells formed from exuded blood corpuscles and desquamated epithelium lining the alveoli. The congestion is mainly in the

pulmonary vessels but also to a certain extent in the bronchial vessels. On handling the lung, crepitation is found to be much diminished and the surface is easily indented but there is still sufficient air in the lung substance to float it on water. On cutting it a frothy, tenacious, reddish-colored liquid is squeezed.

The second stage is called red hepatization from its resemblance in color and consistence to a normal liver. There is no crepitation in this stage, the lung being

extremely fragile and breaking down readily. The infected lung is increased in size and weight, the latter amounting to four pounds in the entire lung, and is caused by the exudate excluding the air. On sections, marbled appearance is presented due to the apportionment of the exudation within the vesicles. This matter consists of coagulated fibrin entangling corpuscles with flocculi and fibres and also segmented epithelium, in its meshes. The lung sinks in water. The interstitial

structure is also marked by the exudation. The color of which is a dark reddish brown passing into gray.

There is no sharp demarcation from the second to the third stage. The distinction is a pathological not a clinical one. The red color is replaced by a gray or yellowish-white one. This is partly due to the pressure on the vessels by the exudate but chiefly to fatty degeneration of the exudation. On section the the granular appearance is less apparent. The lung is

pulmonary parenchyma and the air cells are increased in number. The process passes now to resolution or fibroid infiltration. The morbid process of Pneumonia commonly in one of the following five ways; Resolution, Purulent infiltration, Abscess, Gangrene or Chronic Interstitial Pneumonia.

<u>Resolution</u> is the natural mode of termination, the lung gradually returning to a normal condition. This is accomplished by a fatty and mucoid degeneration of the morbid contents of

which they are liquified and then partly removed by expectoration but chiefly by absorption; at the same time the blood vessels gradually regain their normal state and a free circulation is re-established

Resolution by Infiltration takes place when resolution is delayed. Every part of the lung becomes filled with pus, even the interstitial substance becomes infiltrated in places. The lung tissue gives way and a number of tubules are thrown together. Such a result is favored by a debilitated constitution and the abuse

of alcohol. If the cavity is small the contents may be expectorated and absorbed and granulation and cicatrization result but this is not always. Abscess is generally the precursor of death.

Gangrene is rare, occurring in less than 1½ per cent of cases. Alcohol favors gangrene by diminishing the resisting power of the tissues. The patient will expectorate shreds of putrefied lung.

Chronic Interstitial Pneumonia may result from an incomplete resolution, with a

gradual involvement of the alveolar walls which become thickened by a new growth producing a fibroid induration.

The lowest lobe of the right lung is most commonly attacked, the remaining lobes being attacked in the following order; lower lobe of left lung, upper lobe of right, upper lobe of left, middle lobe of right.

Two lobes are not generally attacked at the same time.

Double Pneumonia occurs in from five to fifteen percent of cases and is most common in the

The duration of the different stages varies. Indications may appear on the first, second or third day and usually cease on the seventh by crisis but may end before or continue to the thirteenth day. The three stages last until the end of second week in favorable cases. The disease may increase rapidly in the aged. In childhood and old age both sexes are equally liable. But from twenty to forty it is rare and at that periods frequent in males as in females. This may be due to greater exposure to predisposing causes

Symptoms The disease usually begins suddenly, prominent signs being present in less than one fourth of the cases and then they may not be a part of the disease. They are most commonly met with in children & though with them the attack is often ushered in with convulsions.

An initial chill is not met in eighty five per cent of cases and is more prolonged and severe than in any other disease except Pneumonia and Intermittent Fever

The chill is less common in old

[illegible]. Convulsions in children [illegible] to be [illegible] of the effect of the [illegible].

[illegible] the child, or [illegible] following it, there is fever accompanied by a [illegible]. There is dull in character. There is [illegible] there is [illegible] [illegible] complete [illegible].

Respiration is generally [illegible] this is more marked and pronounced than in any other affection, the number reaching from, thirty to eighty per minute. This symptom is not in proportion to the amount of lung involved but is apart

of the natural history of the disease. The ratio of perforation between respiration and pulse is greatly perverted. The pulse may be found a hundred to a hundred and ten and the respirations seventy or eighty.

Dyspnoea does not seem to depend on lung complications and may be absent. It may depend upon the extent of inflammation, or upon the presence of complications such as peritonitis.

Pain, usually not severe and persistent, characteristic but is subjectively most prominent symptom. It may be absent in the aged and where

the morbid process is [illegible]
Cough is of a short lasting character at first. It is almost [illegible]
[illegible] [illegible]
absent in the aged.
The expectoration of the sputum is [illegible] at first [illegible]
tenacious character, but it changes on the second or third day be[illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
the formed fever [illegible]
is a bad sign, denoting rapid
[illegible] [illegible] [illegible]
the sputum becomes more fluid
and abundant and contains
[illegible] [illegible] of the fever [illegible]

Expectoration may be absent in [illegible] from inability to make the required effort, also in [illegible] states. When it stops and [illegible] in old age it indicates [illegible] [illegible]. The temperature may be [illegible] or decidedly [illegible] [illegible] maximum in [illegible] days. There are evening [illegible] [illegible] and morning remissions [illegible] it reaches a hundred and seven-eight it is a fatal symptom. There is generally a [illegible] [illegible] in the morning, [illegible] [illegible] but this is not constant [illegible] it may become [illegible] [illegible] [illegible] is frequent at the [illegible].

The alae of the nose are in con-
[illegible] action which with the
flattened face and [illegible]
[illegible] make up the expression
[illegible] Facies Pulmonica
[illegible]
[illegible]
[illegible] There is much depression
of the [illegible] [illegible]
[illegible] like those of [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]

are absent.

Physical Signs are readily [illegible] in the congestive stage. Inspection shows impaired motion on the affected side and abdominal breathing in double pneumonia. There is a slight increase of vocal fremitus and the resonance is impaired to the dull [illegible] of the consolidation. The ear detects nothing [illegible] of lymph begins when the crepitant rales are heard.

These are characteristic of the first stage and are caused by the [illegible] effusion of the cell walls by the entrance of air. They may be [illegible]

in children. The signs of the second stage are different from those of the first. Movement is still less with an [illegible] on [illegible] side.
Vocal fremitus may increase from consolidation unless there is pleuritic effusion.
Percussion gives dullness with the increased resistance over the affected part. Auscultation gives bronchial breathing as the characteristic sound of this stage. There is also bronchophony. The transition from the second to the third stage is not marked but there is a gradual diminution

of the organs. The breathing is mainly broncho-vesicular; bronchophony is succeeded by a softer blowing sound; the morbid phenomena are extensive and expiration is heard in both inspiration and expiration. This is the expiratory rales and is coarser and louder than the inspiratory rales as it consists not only of the expiratory rales but also of a fine autoexpiratory rale. Fever reaction is good — mainly intermittent.

When spontaneous expectoration occurs the appearance of the second stage persists

Diagnosis The principle diseases compounded with Pneumonia are; Pulmonary Congestion and Edema; Capillary Bronchitis; Pleurisy; Catarrhal Pneumonia; Meningitis and Typhoid Fever.

Pulmonary Congestion and Edema are secondary diseases and lack the chill, fever, characteristic sputa and are limited duration rather complete.

Capillary Bronchitis occurs chiefly in children. It is bilateral and has antecipitant rales most marked on expiration, bronchial breathing, resonance

at slightly increased and the
heart is frequent.
Pleurisy has but a slight
chill, no expectoration or sputum
when there is a bronchitis and
then it is mucous. Pleurisy
has the friction sound, again here -
more with the respiratory move -
ment. When effusion occurs
there is dulness but no vocal
vibration or vocal fremitus.
Lobular Pneumonia follows
bronchitis, is found in children
and is a debilitating disease
Dynamic fever has no chest
involvement. The fever & other
the initial symptoms only are similar

typhoid fever, the rose spots, the diarrhoea, the enlarged spleen and the temperature second none of which occur in the state called Typho-bacteremia.

Prognosis is favorable when a crisis occurs about the seventh day with a free perspiration; when there is a return of the normal proportion between the respiration and the pulse and a reappearance of the chlorides in the urine. Unfavorable when the temperature remains persistently high as it is indicative of pneumonic infiltration

Pneumonia of Scarlatina almost invariably terminates fatally, when the pneumonia and all the other complications point to a grave prognosis.

Mortality uncertain. It is estimated to range from five to twenty five per cent. The maximum is amongst infants and old age. Some ten to forty-five uncomplicated cases usually terminate favorably. Complications affecting the heart action as the exanthemata increases the gravity. Sudden suppression of the eruption indicates heart failure.

1 case of the hundred and fifty is fatal, when it reaches a hundred and thirty or forty and becomes intermittent or a hundred and twenty for two days, the prognosis is unfavorable

<u>Treatment</u> The disease being a self limited one, there is no one plan to follow. The natural processes must not be interfered with too much but the treatment must be directed to the system at large to prevent complications and to control the chief symptoms. All debilitating measures as blood letting

and bitter emetic must be avoided as the patient needs all of his strength to pass successfully through the crisis.

At the very start of the first stage a small hypodermic of morphia is very useful in quieting the nervous system.

The patient should be kept at rest in a cool room with plenty of fresh air. Cotton batting covered with silk is the very best protection to the affected parts as it keeps up an equable temperature. If the case is seen in the very beginning before much of the lung

is overstrung, the exudation may be prevented or at least greatly ameliorated in accordance of a full use of Quinine and Morphia. Nothing will remove the exudation after it has set in. In the first stage quinine has a controlling action on the capillaries and checks the morbid movements of the white cells. Tonics and stimulants are dangerous and can only be used when the heart is weak and are not admissible in the second stage. Whether or not used in the first and second stages as they lessen the tendency

for a time correlation of the pulse. The Bicarbonate or Citrate of Potash gr. v and later the carbonate of Ammonia as it is also a stimulant

In second stage sedatives must not be employed even opium may stop expectoration. The two chief medicaments of this stage are; high temperature and heart failure. They must both be carefully watched and treated. For the first the application of crushed ice applied to the carotids is better than cold sponging as it causes no shock. Quinine in full doses is the best

indigestion. Heart failure is the most common cause of death and is the most likely to occur at the onset. To prevent it the patient must have suitable stimulus and if then the heart shows feebleness give judicious stimulation.

Lastly we must see that the pulse will reach 114–120

Alcohol is best in the old and in alcoholic asphyxia should be given from the first. It should be given in small doses—half an ounce every two hours generally being enough and it should be a stimulus of its

does no benefit. When the case is far advanced before treatment is constituted, should every effort save the patient. In this case it should only be employed where medicated as at the crisis when the heart is apt to fail and at this stage the heart must be very closely watched. The carbonate of ammonia is very usefully employed with the brandy at this time as it is also a very good cardiac stimulant. If the kidneys do not act well give infusion in tea or fifteen drops every of the tincture every three hours.

as a cardiac tonic. Often there is wakefulness and delirium give potash, iron, tincture of chloride hydrate to promote sleep. A large blister may be used in the third stage to promote expectoration.

A tonic treatment is indicated during convalescence.

Entrée libre

6 p.

Enteric Fever

After a more gradual approach than
by other fevers, with languor, debility
headache and some times epistaxis,
and bronchial cough, the patient
goes to bed with fever, or may go to bed
with high fever, pain in limbs, back
and some times commencing in the head.
The rise of fever is gradual for the
first week, commencing at about
103 degrees and gradually rising one
degree a day, for a week, reaching
at 105½, remaining about two degrees
higher in the morning than in the
evening, then of a remittent
character for the next two
weeks, with —

signs

own

Some

once,

after

d

e

lers,

[illegible] the patient is disinfected, with muriatic acid, muriate of iron, or carbolic acid, and buried in the soil, where it is non-poisonous, [illegible]

Diagnosis. At the commencement, begins with a chill if at first only like the appearance; followed the second week by dozing or muttering delirium all day, and a lapse into sleep at night, slight delirium or wandering. [illegible] about, the same time, generally a moderate diarrhoea, there is a coated tongue, [illegible] feelings of a general nature [illegible] as [illegible] the bowels [illegible]

of the same week, rose colored

pearing

the right iliac region, and gurgling

sounds under the hand (when pressed

upon the abdomen) of a typhoidal

character, are usually present. The tongue

heavy, by the accession of

or

can generally find the cause
tagion; to say nothing of the rapid
cure [illegible] of albert, is
[illegible] to 0
the average being about four weeks.
The morbid anatomy, or the has affected
[illegible] 1 2

e e es e

ic , come d

ds has

certain an un

icatrization of the

glands are often complicated and

d some times ulcerated. The

ic glands are more or less enlarged,

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it. The danger in typhoid fever is

, complications

[illegible] hemorrhage, perforation of the bowels, through sloughing of Peyer's [illegible] [illegible] [illegible], [illegible] of the patient should be [illegible] food. There is also danger of rupture of the bowels from [illegible] distention.

The treatment of Enteric fever should be largely dietetic, consisting liquid food given at least the prostration [illegible] frequently, may even three or four hours, as the case may demand. There is nothing better than good sweet Milk, Beef tea, and Chicken water for a change. If the bowels should be constipated at first, give mild doses of

stoval ic

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e enteric

out

very how

carbonate of

to the hea

used

over the crisis. Serpentaria

used as a heart stimulant

remedies are contraindicated.

cations of pneumonia, Cerebrotic,

[illegible] he treated as they are
[illegible] general principles. In fact the
[illegible]
[illegible]
[illegible] nature [illegible]

later the

disease will [illegible] septic fever from Peyre's glands and the patient has every symptom of septicaemia which will generally have fatal. In convalescence with bunch and non-irritating liquid food should be given, and no solid food allowed until cicatrization is complete, also no over-exercise allowed.

Roger Brooke

Norlick PO
Montgomery Co
Md.

[illegible]

[illegible]

[illegible]

[illegible] the [illegible] [illegible]
[illegible] the process [illegible]
abolition [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
current, the [illegible]
[illegible] which has [illegible]
[illegible] into its [illegible]
[illegible] [illegible] the [illegible] [illegible]
[illegible] [illegible] must [illegible] [illegible]
a constant [illegible] current [illegible]
[illegible] with [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] the [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
of the [illegible] [illegible]

[illegible]

pain carried into the
no channels & is there
carried to nerve power we
are especially prepared
in matter to remove it
from the body.

As the glycogen contained
in the liver is destined
this important function
& the process by which
it is carried out has
been & is still occupying
the minds & experiments
of physiologists throughout
the world. Numerous
are the theories which have
been brought forward to our

and another has contributed
his share to the records of
medical science. All so far
as research is supported by
statements of modern
probably investigation to be
made more accurate.
But these have now given
way one by one until
at the present time not
two theories stand prominently
in the consideration of the
medical profession
which the Glossenculus takes
in deception that the

process of removing certain excretory products, contained certain other elements which are essential to the proper nourishment of the body to remain in it. Mere mechanical process would seem evident to every one, leaving the whether strictly of Nature's laws.

This relief the advocate of the secretory theory upheld. But to enable us to form a just & unbiased opinion we must be prepared to study both sides of the

[illegible] certain that [illegible]
[illegible] enthusiasm and
inasmuch as many scientific
men have given their support
to the theory of secretion
it should receive our
unprejudiced attention.

It is claimed by those
who uphold the theory that
a portion of the water con-
tained in the blood in its
passage through the glomer-
uli is filtered through the
single layer of epithelium
which covers the vessels
carrying its albumen and
the solid constituents of urine

in solution with it passes downward to the convoluted tubes, where they hold that the secretion takes place and that the albumen and a portion of the water is re-entered by the peculiar wedge-shaped cells of the convoluted tubes and thus restored to the blood.

This theory seems in some instances to be supported by pathological experience which shows that the removal of the wedge-shaped epithelial cells of convoluted tubes may be followed by

the appearance in the urine of albumen and casts consequent on the destruction of the epithelium and recession of the tubes commonly contain a fluid resembling Plasma.

Against this theory were those who being advocates of vital secretion think that the cells of the glomerulus and of the convoluted tubes are precisely the agents called into activity upon the application of the peculiar stimulus which nature provides in the living organism, which rela-

it may be increased without pathological change in the elements upon the application of certain drugs to the cord, that the secretion of response to such stimuli is inherent in the cells lining the Malpighian as well as those lining the convoluted tubules and that by virtue of certain properties possessed by them in response to this stimulus the thin flattened epithelial cells lining the inside of the Malpighian capsule will pass

tracted from it to cover the walls of the vessels within which are these special organs, the secretion of this part of the urine from the blood, the other constituents of the blood passing through the glomerulus are changed. Does this property of secreting water alone seem unfavorable? Can not water be secreted as well as any other constituent of the body? What certain elements have greater or less affinity for water is well established that the

secretion of the Parotid gland is rarely impaired & it is seldom doubted that under certain circumstances it is excreted by the skin with the addition of only a small quantity of protoxide chloride is equally undoubted.

Take in support of this view also the records of the Pathology of cholera the scourge which is so markedly characterized by the casting off of the epithelium from the mucous membrane of the alimentary canal as well as other

portions of the body, falling in flakes until each part carries it away and leaves almost none behind to absorb the water which the patient pours into his stomach to appease the ever-raging thirst, each month and being taken only to be cast up again, the mucous membrane which in its normal condition absorbs it and adds in its appetite into the economy being cast off. This we know to be a fact.

Now then we cut the epithelium of the alimentary

possess the function & corporate of excreting matter from the, a secretory process if the mucous membrane of the stomach & intestines possess the inherent property of secreting it for the nourishment of the body? those who uphold this theory account for the passage of the solid constituents of the urine from the blood to the tubules in experiments which tend to show that they are secreted and passed from the capillaries surrounding the tubules into the tubules themselves by the

under shapes well suited to the convoluted portion of the passage, being aided by the flow exerted by the blood through the capillaries at this point, thus constituting their peculiar function, and the idea seems to be corroborated by the fact that in interstitial nephritis that condition in which the lesion in the kidney seems confined exclusively to the convoluted tubules, the bile secreted by the pressure exercised upon them by the contracting tissues the solid excreta are so greatly dimin-

ceed in Concentration; portion in which the lesions are located almost entirely in the convoluted tubules the solid element of the urine is diminished until the specific gravity may fall to 1005; this being the case as the disease progresses, becomes established the lesions in the tubules more marked. Thus demonstrating the fact that the function of the epithelial cells of the tubules was at least at the time annulled. That the urinary flow is increased as blood, bro-

urine may be a well established fact and this has been brought forward in support of the filtration theory but it cannot adequately explain the formation of urine because the urine differs so materially from the fluid one could obtain as a filtrate from the blood. In health it contains no albumen, a substance on which the blood is very rich and it has very much more salts than the blood. There is therefore both a quantitative and a qualitative difference which implies a

distinct process of secretion which must modify the process of filtration.

Apart from this the general anatomy of the kidney would give us the idea of two separate secretory apparatus; one in which the secretory process is more or less modified by blood pressure — namely the glomerulus — and the other — the convoluted tubules whose peculiar cellular elements could only lead us to accept this view at once.

In support of this theory of

[illegible] section [illegible] [illegible] certain experiments which tend to counterbalance the impression which we might form that the flow of urine was entirely dependent upon blood pressure. It has been shown that a flow of urine may be excited after the normal flow has been arrested by diminution of blood pressure; thus if when the urine has ceased to flow, in consequence of section of the medulla oblongata, if urea is injected into the blood, thus we hold in the balance in the [illegible]

one theory stimulate the contraction of the alimentary to perform its function a copious flow of urine is set up independent of blood pressure. Can this be aught else than response to stimuli upon the part of the cells of the glomerulus? or would not such a response to such an experiment as the foregoing if the passage of urine depended upon blood-pressure exclusively mechanically through the vessels where walls are more loose & relaxed? Hardly I think.

In the interest of science as a means of arriving conclusively at a correct solution of this problem of the secretion or filtration of urine Ludwig has performed experiments upon animals which seem to materially strengthen the former theory. Into the veins of animals in which the urinary flow had been arrested by section of the spinal cord below the medulla oblongata he injected the sulphindigotate. Subsequently he killed the animals and examining the kidneys we

consequently he ascertained that the pigment which he had injected had passed from the blood into the renal epithelium lining the convoluted tubes and from thence had passed into the tubules and was precipitated there in solid form. From thence it had travelled slowly a little way down the tubules and there being no flow of urine it remained very much where cast out by the renal cells. There was no trace whatever of it having passed through the cells of the glomerulus and those cells which

cells of which the [illegible]
instrumental in the passage
from the blood to the interior
of the tubules were the intra-
tubular cells alone. This experi-
ment was then compared with
and by varying the quantity in-
jected and the time which elap-
sed between the injection and
inspection Heidenhain was en-
abled to trace the coloring mat-
ter step by step into the cells of
them into the tubules and for some
little distance down their chan-
nels, thus verifying the first
experiment. Cohn subsequent
experiment of the same in

vestigator is particularly in
terpreting as having demonstrat
ed the glandular secretion of
the wedge shaped cells. After
injecting a certain quantity of
pigment into the veins of an
animal & allowing such time
to elapse as he thought would
suffice for the passage of the
first injection into the tubules
he injected a second quantity
upon examination he found
that the passage of the last
injection had been most
incomplete & irregular. From
this he was lead to believe that
the cells were examined by

their previous efforts, since could not respond to the pulsations of the indigocarmine with which they were supplied.

In the Amphibia the kidney has a double blood supply the renal artery and a branch which goes to the dorsal vein alone. This gives its organ a double supply, the general origin starting in a vessel which goes into the substance of the kidney from the so called renal portal system which only serves to form a sleeve around the tubules and supplying them

secretion. Hence it may readily be seen how on the means of shutting off one or the other of these blood supplies it could be ascertained what substances were secreted by the glomerulus and what by the cells of the tubules. Heidenhain made use of this and performed a number of interesting and instructive experiments upon frogs. In one he tied the renal arteries thus shutting off the supply of blood to the glomeruli, an injection of urea was then made into the blood causing

a flow of urine in which no albumen was present, this experiment would lead to show that not alone the glomerulus but the cells of the tubules possessed to a limited extent the property of excreting water and probably at such times as the glomerulus is disabled act vicariously the ligatures being removed and when the flow again commenced to pass through the vessels of the glomerulus, the urine at once became albuminous thus showing that the arrest of circulation

this fact made to impose the epithelial cells covering these vessels walls as to allow of the passage of albumen into the tubules. The irritating tumors were only temporary and upon the restoration of the capillary walls to their normal function and continuity the albumen at once disappeared from the urine.

This experiment bears strongly upon the theory in question and tends to show conclusively that in their normal condition no albumen or other substances than water pass

through the walls of the vessels of the glomerulus and that some slight injury or disarrangement of its epithelial cells at times may be temporarily present, to disappear spontaneously when through its usual process of repair nature effects a cure. The importance of this matter to the practical physician can hardly be overestimated. Diseases of the kidneys are among the most serious troubles brought to our notice and there arises the question How shall I treat this condition? Am I to give only pure

drugs as shall by causing a rise in blood pressure promote a rapid filtration of the watery particles through the walls of the glomerulus? or are I to stimulate the cells to secrete this water and effete matter and thus pass it from the system?

A human life may depend upon our correct interpretation of the evidence of disease action as compared with the physiological process. Pathology is ever dependent upon physiology as its basis and then cell

cation is essential to scientific therapeutics.

Probably further investigation will remove the uncertainty lingering over this matter at present and allow of our remedies being applied upon a practical and we hope entirely successful basis.

Edgar A. Brooks

Univ of Ma
Dalton Ma
Feb 15th/87

A

Thesis on Pneumonia

Presented to the

Honorable

Faculty

of the

University of Maryland

By

Peter C. Brubaker

Quincy, Virginia.

Session 1884-85-86-7.

23 p.

[illegible] ? [illegible]

[illegible] ;

[illegible] "[illegible]" [illegible]

[illegible] ;

[illegible] [illegible] [illegible] [illegible],

[illegible] [illegible] [illegible] [illegible]

[illegible] [illegible] ; [illegible]

[illegible] [illegible] [illegible] [illegible] [illegible]

throughout the disease.

At first the expectoration is difficult

and painful ; but after a few days

it becomes free, and the oppression

of breathing is mitigated.

The sputa are generally viscid, and some

of the letter of the [illegible] [illegible],

mixed with small bubbles of air, and

[illegible] [illegible] [illegible] [illegible]
[illegible] (instead of going off a resolution)
[illegible] due to [illegible] [illegible] [illegible]
[illegible]; respiration becomes [illegible]
depressed, but less painful.

Pneumonia may terminate [illegible]
— by induration or hepatization.

Pneumonia may be considered under
3 varieties, as follows: (1) Croupous or lobar
(2) Catarrhal or lobular: (3) Interstitial
Chronic Pneumonia.

(1) Croupous or lobar Pneumonia; known
as "acute Pneumonia" This is [illegible]
[illegible] al disease, due probably
to a specific organism.

The local process is characterized
by a diffuse inflammatory hyperæmia

is usually a lung, and by large and
compact material, yellow and
consolidated, sometimes the whole
involved to one; characterized by
severe chill, fever, pain, dyspnoea,
cough, rusty sputum and great prostration
& is usually occurs or follows.
Former occurs as an independent
affection; whereas the latter are
the result of some antecedent cause
or pulmonary inflammation.
It may be given as systematic or
with local inflammation; self limited
and terminate by crisis.
Acute type is little; Primary, or else
pneumonic, secondary, and extends over
one lobe or more, involving the
vesicular structure of the lung.

Cause: Croupous or lobar Pneumonia in most cases results from that common cause of inflammation — namely, taking cold commences after an undue exposure as a primary disease. Injuries to chest walls, abuse or excessive, gout or Rheumatism; In-door-life; Debility; bad hygiene &c.

Seasons: Autumn and Winter most common. There is a special organism present. By many, they are the sole cause.

Children after 1st dentition or 2nd and old age most common.

It is common in the suckling infant but declines after the second year until after 2nd dentition.

Masculine sex is more frequently attacked, as they are more exposed.

Pathological tendency, some cases in the lung, liver, its constituent tissue. Pathological Anatomy. – Disease and lesser most common on l. of the lower right side; thence, some below left side, thence upper right side. Vice versa, not last rare.

3 Stages :– 1st Congestion or Hypostatic (Congorgement) 2nd Consolidation or red Hepatization – 3rd Gray Hepatization.

Stage of Congorgement – there are increased blood supply and pouring out of the exudation. The lung has a reddish-brown appearance, however, floats in H_2O, but sinks lower than normal lung crepitates but little, less than in health, no longer elastic, not collapse, but still contains some air, vessels greatly distended

2nd Stage red or gray, consists of exudation of a viscid albuminous fluid, admixed with white and red corpuscles, which rapidly coagulates within the air cells and alveoli, filling them, causing red color, heavier, sinks in H_2O; lounds heavier than normal, therefore larger, solid and not inflated artificially, crepitates under the finger, friable, nutmeg color.

The exudative fluid remains for a short time when it solidifies, and causing inflamed part to be without air. Cutting it resembles liver in color.

Bond Gray Hepatization.

The white blood corpuscles continues escaping from the vessels, filling the alveoli; epithelial lining the air cells

[illegible] become more [illegible] and
[illegible], complete [illegible] to
cells; tissue much softer and when
cut there is a turbulent liquid flow
(when cut) oozing. Color is yellow-
or ruby, color is due to hemorr-
of vessels, fatty degeneration - the
cell [illegible] may go into each other.
These pneumonic processes may ter-
minate in 4 ways:
"Resolution may terminate in most
cases by absorption and expectoration
of exudation, alveoli returning to normal.
Or exudation changing into purulent
fatty mass setting up in (12) abscess, but
is rare, due to impaired health, abuse
of alcohol, attacks upper lobe. Solitary
or many. Terminate fatally or open into
[illegible]

the bronchial cavity; pneumonia or interstitial pneumonia, causing emphysema & bronchiectasis (2) gangrene, rare due to coagulation in pulmonary arteries, causing necrosis into the pulmonary tissue; septic infarcting due to small area of gangrene, either diffused or circumscribed.

Chronic pneumonia, cancer, tubercle involved, thickened by a new growth of fibro-nucleated tissue.

Duration of stages varies. 1st 1-3 days; (2) 3-7 days; (3) 1-3 weeks.

Symptoms: Onset with a severe cutting pain in side, chill, convulsions; old age coma; [illegible] in young; [illegible]. Temperature drops first one, to 103° F., lower from 4 to 4 A.

The external temperature is high, face

flushed, eyes injected, headache, pain in [illegible] and muscles of neck.
Pulse about 70 - 80 a minute, tongue coated, no appetite; nausea and sometimes vomiting at first or second day, rational symptoms indicate the seat, pain in side, cough increased by deep breath, dimness varies, may not be present for hours, increased pain more acute.
Pleuro-pneumonia. Pleurisy, this may not be pain until it comes to the surface.
Pain not severe at first, decline.
Respiratory rate, are more frequent 20 or 30 per minute, with flushed anxious countenance, cough, husky, suppressed and painful. At first there is frothy mucous resembling albumen and thick, and later rusty sputa remains adherent to the bottom of the vessel.

Pus not always mixed with the sputa at first, appearing on 2nd day, when during the stage of congestion or about 2nd or 3rd day and then, when consolidation takes place, pulse changes. Crisis on 5 7 9 or later.

Sudden fall of temperature on other days a Change. Resolution 6 to 10 days.

Temperature continuing high for 10 days after infiltration is indicated and upper lobe involvement causing higher pulse and temperature, circumscribed flush on cheek-bone, side of nose.

There may be complain of pain in chest varying with the part affected. Cough is moist & harder more than in typhoid pneumonia. In typhoid pneumonia the pus produces high temperature.

[illegible]

[illegible] excited [illegible]

are terminal [illegible]

Lobular Pneumonia when there is congestion due to pulmonary obstruction [illegible]

Inspection, first stage deficient movement of chest on affected side, [illegible] affected on each side breathing [illegible] by interior costal restriction.

Palpation, at first stage, vocal fremitus more distinct than normal.

Sudden exaggeration of vocal fremitus in 2nd stage. Cardiac impulse in normal position. Percussion, [illegible] at first, dullness follows in 2nd stage.

Auscultation, at first stage, [illegible] vesicular murmur, associated with during inspiration, [illegible] crepitant rale, 2nd stage Bronchial

[illegible] resembling a lobe [illegible]
[illegible] is not filled with [illegible].
[illegible] or [illegible] filled with fluid [illegible]
first, [illegible] at first only at time,
and stage breathing changing from [illegible]
to [illegible] bronchial, (redux) returning
with moist and bubbling rale.
Dyspnoea, Oedema of the lungs, [illegible],
Bronchitis, meningitis, [illegible] fever,
Pulmonary congestion, and Catarrhal Pneumonia.
Pulmonary congestion due to obstructing
heart no chill, Oedema and congestion.
[illegible] are [illegible] stage, in Pneumonia
it is not, Bronchitis, in bilateral, while
Pneumonia unilateral. Expectoration in
Bronchitis is mucous fluid, while rust
in Pneumonia. Pleurisy chill has marked
dry cough and expectoration not rust.

[illegible] pneumonia [illegible] is
a bronchial inflammation in Pleuro
pneumonia or Pneumonia.

Chronic bronchial pneumonia occurs
more in children, regular of Bronchitis.
Pericarditis [illegible] emphysema also may
be a complication. but rare.

Meningitis comes on slowly and with very
of temperature. Effusion pain, tender
spots on abdomen. Pneumococci [illegible]
can not treated, always [illegible]. temperature
and pulse high, former 105°; [illegible] 120.
Pneumonia of drunkards most always
terminates fatally. also. Pneumococci Pneumo
Bacillus. purulent infiltration, colicrase
and gangrene; after 60 yrs. 2/10 of all
insane over 75 die slightly attacked with
pneumonia; 2 days high temperature without

[illegible]; upper [illegible] and
[illegible] [illegible], [illegible] [illegible]
self [illegible] [illegible]. [illegible] is so [illegible]
inclusion: but at least the mortality
is [illegible] to 25%. Cardiac failure is
the cause of death; also by asphyxia,
abscess and gangrene. [illegible] not
fatal, treat by [illegible] it up &
support; followed by poultice; feeding,
milk (tartar emetic) at or about chill;
morphia for pain. Internally, tinct. veratrum
viride gtt. i–iii or tinct. aconite gtt. ii iv or
tinct. digitalis m x, repeated every ½ hr.
until impression is made on circulation,
& [illegible] Quinia gr v every 3rd hour,
quiet room. Ventilation. 65° in room.
Cotton jacket; covered with oil-silk.
When temperature not high, morphia

should not be used only when there is
[illegible] In first stage, bleed the exact
for in second stage exudation cannot be
gotten rid of. After 2nd stage quinine
will not get rid of the exudation.
Quinine and morphia given in first
stage may cut short an attack, albumen
in first stage does good. Bicarbonate of
potash lessens the coagulation of the
fibrin gr x xxx. Carbonate of ammonia
as a stimulant especially after [illegible] stage.
No sedatives must be given after 1st stage
stage of temperature in 2nd stage, cardiac
[illegible] must be watched. Stinging the feet
first limbs, then other joints. Crushed ice
applied to each side of neck in bladder
quinine given in high fever and weak
heart acts on both stimulant [illegible]

[illegible] - [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] and
after first stage [illegible] very good
[illegible] [illegible], [illegible] [illegible]
[illegible] be watched, [illegible] [illegible] in [illegible]
[illegible] [illegible] [illegible], digitalis, &c.
℞. x ℥ ss turpentine. ℞ x ℥ ss
[illegible] may be used in 2nd stage,
if pain, Blisters do good, Resolut.
immences give tonics, diet, [illegible] pain
[illegible] [illegible] [illegible] stimulants,
℞ [illegible], quinia ferrum and
[illegible] diet, stimulants, &c.
[illegible] hard blisters and feet immersed into
mustard bath, a purge may be given.
Iodide of ammonia does good,
turpentine - &c. Iodide of ammonia
and Iodide of ferri may be [illegible]

Under a Chronic Bronchitis &c.
Chronic Bronchitis and Pulmonary Consumption. By these terms, is meant a chronic inflammation involving the bronchial and cellular tissue or chronic. Etiology, is regular of Bronchitis, Whooping cough, measles, rickets, scrofula, fractious, hoarseness, emphysema, disease of the heart. Frequent in young and old, low in layers said by pain and exposure aid its development, also exposed to climate changing. Symptoms and Pathological Anatomy, at first there is hyperaemia of the mucous membrane of the Bronchi, Bronchioles and air cells accompanied with swelling and abnormal secretion, effected part is not

[illegible]

[illegible] the [illegible] [illegible]

is removed by absorption, if not the

cells dropsy causing a [illegible] mass

passes into the Chronic form.

Symptoms, this may be divided into Acute

Sub-acute and Chronic.

Acute. Onset by a gradual rise of tempera-

ture 102° 103° F with the rapid breathing.

Inspiration is short and imperfect,

Expiration prolonged. Pulse frequent

100 120, Cough during bronchitis is

loose, now becomes short, hacking,

dry and painful, soon followed by

mucopurulent expectoration; no appetite

; bowels loose; urine scanty and high

Colored, and surface colored with perspiration

Sub-acute and Chronic have the same

symptoms, only the duration is longer and exacerbations irregular.

In general this is not acute, although may prove fatal in a few days, depending upon its seat; the fully developed resolution is by lysis, secreted matter is soon recovered.

Percussion — dullness in patches over both lungs, the first not involved gives a tympanitic note.

Auscultation, vesicular puerile breathing changing to moist bronchial, associated with sub crepitant rales, as the disease progresses towards resolution, the rales become finer and more copious. Sequelae, complicated with atelectasis or collapse of the lobules, when [illegible] takes place, is

[illegible]ced by emphysema. Should the catarrh fail to the alveoli and [illegible] undergo fatty metamorphosis [illegible] phthisis, pneumonic phthisis results. Diagnosis. Catarrh [illegible] catarrh, there is no dyspnoea, fever and dullness, no large bubbling rales. Croupous pneumonia is unilateral, catarrh bilateral. The former self limited disease, latter no fixed duration.
Acute tuberculosis occurs with bronchitis. Oedema of the lungs is a bilateral disease - associated with a short dry cough and dyspnoea but no high temperature like catarrhal pneumonia.
Prognosis. ½ terminate fatally, as it is a secondary disease. It may terminate into pulmonary phthisis.

treatment. Emphysema and [illegible] of posterior
of patient. Frequently longer diet more
nutritious, administered frequently. [illegible]
chicken broth, mutton and oyster broth,
milk toast, [illegible] and [illegible] through
out the attack. High fever of [illegible]
keep air in room moist, stimulant
as common preparation, port, &c.
especially for convalescence.
Recall, mustard poultices or turpentine,
followed by stimulant poultices.
Scattering rhonchi if a chronic lesion.
Interstitial Pneumonia: a chronic affection
of inter alveoli; cells seem hypertrophied,
confirmed into a tough mass; region
in which and contains inter alveolar
~~[illegible]~~ connective tissue is involved
and compacted, exudation of fibrin and corpuscles.

Morbid anatomy atrophied lung c
like a gristle, also dilitation of large
Aetiology sequale of Bronchitis, fibroi
seldom if any fever, Symptoms, N
marked at first, dyspnoea coug
temperature, pulse max menas, not
night sweats, dropsey may occur
lower part of lung excit: due to
of blood, Auscultation, apex of
may be misplaced due to contract
chest; no air in the lung, Bronch
breathing, Bronchophony and Pector
distinctly heard with a cough gu
rale, there is purulent breathing on
side, Diagnosis, Not clear at fir
lobar Pneumonia begins with a
This not, lobar breath not fort
In Interstitial, Cancer is always

Secondary Cancers in glands, there
living. Cancer does not last mor
2 yrs while Interstitial Pneumonia ma
for years. Prognosis Not always fa
may last some ti. without complic
Phthisis most apt to supervene.
Vessels may become weak, causing
and death; treat, in early stage, ma
Cured. Stimulants ner. are very co
Cod liver oil, warm clothing, f
around chest; Diet to change (
especially milder m. Iodide of
Chloride of gold and sodium, H
rules strictly carried out; Sund

Typhoid Fever.

Wm. F. Chapman,

Class 1st and 2d.

27 p.

[illegible]

[illegible] Typhoid [illegible]
[illegible] a fever [illegible] synonymous
[illegible] Typhus. Hence the remarks [illegible]
applied to this [illegible] of fever &
infection on account of so many
[illegible] having a typhoid tone
still another name has been fre-
quently used which illustrates its
[illegible], and at still retaining the
name by which it has been so
long known. It is a continued
fever of long duration and usual-
ly attended with diarrhoea or even
dysentery. Probably another fever
has such a long period of incuba-
tion. The interval from the expo-
sure to the failing and the appearance

If the disease is general [illegible]
in fifteen days. The [illegible]
[illegible] and the Peyer's glands
and solitary glands of the upper
part of the small intestine, the
mesenteric glands and the other
[illegible] is generally [illegible]
enlarged. An eruption of [illegible]
and papules appears on the
skin in the great majority
of cases, and is [illegible] in
about from 3 to 21 days. [illegible]
[illegible] is due to the introduction
[illegible] of a specific
poison into a system that
has been [illegible] to receive it
by debilitating causes. The poison

is now known to be a bacillus which produces this disease alone. It is one of the smallest and most vegetative organisms known and has been found in the syphilitic lesions and bones, but seems to effect most by the Pyle's bacillus of Hansen. The principle source of contact for this bacillus is thro' the intestinal canal with the feces.

At the time of elimination from the body the contagium does not seem to possess its full virulence but requires a certain length of time for its development. Warmth and stagnation

mingly, and increase the poi-
son which is carried by drainage
into the sources of water supply.
This water on being used for drink
may give rise to another case
of the disease by transmission
of the bacillus. Dwelling upon
a little more minutely upon
which this disease is spread
the necessary that the bacillus
should enter the alimentary
canal in order that the disease
may occur. Therefore unwashed
fingers must be attended by blood
sense patients do not contract
the disease unless the bacilli
get into their food or water.

[illegible] is divided into four stages (i) The stage of initiation [illegible] (ii) The stage of [illegible] (iii) The stage of [illegible] of the [illegible] (iv) The stage of [illegible] and [illegible] (v) Lastly the stage of [illegible]. Each of the first four stages is about one week in duration and the twenty first stage from the appearance of the [illegible] is considered to be the turning point either one way or the other. The lasting of the intervals varies in [illegible] are four or four and a half

but from the Mesenteric glands of the small intestine. Occasionally the glands of the appendix vermiformis are found ulcerated and ulceration of this part of the bowel is accordingly more. Old cicatrices are found at times in the intestines, which are supposed to have resulted from some ulceration that are supposed to be the result from the healing of the ulcers in a former attack of Typhoid fever. Perforation occurs more frequently in the part of middle life than at another time and presents to a greater extent during the

[illegible] [illegible] [illegible]
[illegible] [illegible] to attack those
who have been overworked, or have
suffered from mental shock
and does not seem to effect those
poor more than it does those
who are better situated as regards
to hygienic influences. Second
ly, if the house the occupier
of the patient should be thor
oughly disinfected, by pouring
carbolic acid or a solution of
Bichloride of Mercury over them
this should always be done, and
the stools should be removed
as soon as passed, and not allow
ed to remain in the same

ill the patient.

The approach of the disease is always very slow and it usually commences with headache, accompanied by a general feeling of malaise. Bleeding at the nose is one of the first symptoms. Loss of appetite and languor over the body. These symptoms gradually increase, the patient feels alternate flashes of hot and cold all over the body, and severe pain along the spine. The pulse will be found to have increased in frequency and there will be a slight fever. The urine will be

scanty and high colored. The bowels will be constipated or diarrhoeal and the tongue will be coated with a white or yellow-brown fur more or less in different cases. This coating gets dark as the case progresses. If the epistaxis occurs several times and the fever begins to rise gradually being higher in the evening than it was in the morning together with tenderness over the right iliac region the case is most certainly one of typhoid or enteric fever.
The fever is of long duration and will generally about three weeks.

[illegible] very [illegible] great in general, and not [illegible] fever. The sudden chill and a bad symptom. The temperature is about one degree half degree higher in the evening than in the morning, and is at its greatest intensity at the end of the month day, provided there are no complications, it is generally about 130 or 140. If it continues and remains for many days, there is a great fatal. The patients face now becomes flushed and red, rapidly spreads over the skin, but not always. Refer to the on

the left side, the abdomen
presenting the abdomen is
occasionally puffed up with
gas and on auscultating obtaining
generally complete evidence the
second week. The hepatic
right iliac region is more marked
and the spleen will be found
to be enlarged. The temperature
will be found the same during
the second week that it was
in the first. The intensity of the
elevation seems to diminish
about the end of the second
week. It is during this period
that complications are apt to
arise such as Pneumonia, or

convalescence of the bowel disease
may intense irritation
When the latter part of the
third week comes around it
generally finds the patient
at his worst point. He now
presents symptoms of exhaustion
, only very much emaciated, skin
dry and tongue coated with
thick but cracked often thickening
on the tongue himself
at times in large flakes, and
leaves a very red excoriated
surface. This symptom of
extreme irritation. Patient
seems to be only half conscious
delirious, and unconscious

does not seem to care about bad
smells, notice. Hands too [illegible]
and not improved by exercise.
Takes food [illegible] the tendons
in his hands and wrists are
subject to irregular contraction
(Subsultus tendinum), and he
shows a desire to knock out the
bed clothes or anything that
he can conveniently lay his
hands on. Cephalalgia is present
during the first week, and is
more or less severe. Vomiting
usually ceases during the second week.
Delirium is apt to be present
during the second week, but
may not occur until the third

It is generally a great honor
to find and the patient is easily
controlled. He may be in a
tranquil state for days and be
little aware of anything around him
always apparently intent on something that
seems to have great attraction for
him. Sometimes though the
patient becomes violent and has
to be carried to bed & kept there until
then questioned he generally
answers at random & little
regard for the truth of his replies.
All patients should be carefully
watched and never left by
themselves as they may be
mild delirium & very impulsive

and [illegible] things.
Secondly the physical causes are considered particularly the mode of [illegible] transmissibility is recommended in preference to the necessity of the disease.
Delirium is not a symptom of any inflammatory condition about the brain as a first question examination more needs the morbid appearance of meningitis. At last the patient complains of intense thirst but at length he sinks into a state called Coma Vigil and owing to this peculiar condition of the mental

[illegible] and [illegible] left
side [illegible] of which [illegible] during
this stage that the patient shows
delirium. At the mouth which
was [illegible] during it the tongue
becomes dry, cracked and may
become quite sore. The teeth
generally had from the deposition
of some material around the
teeth and gums. Diarrhoea is
most apt to be severe and
constipation is considered rather
a bad symptom. Sometimes
the bowels may pass fifteen
or twenty discharges of feces during
the whole course of the disease.
Besides ileac tenderness we have

ymanitis, and gurgling, from
the characteristic symptoms
of this disease. If hydrocephalus occurs
or if the child only about 18 months
old it is nearly always fatal
by producing convulsions or
complication, but convulsions
may occur from other causes
and then it is not so fatal
as when due to hydrocephalus
The symptoms of hydrocephalus
are very plain. The patient
lies in bed with great pain in
the whole abdominal region
& the thighs flexed on the
body to relax the abdominal
muscles. Pneumonia occurs

often as a complication but it is generally hysterical, and may be prevented by simple measures. Phosphaturia and Oxaluria are frequently occurring causes of the disease. The urine is generally passed in small quantities and is of a high specific gravity. Examination should always be made to see whether the urine is clarified as it very frequently happens, and the catheter should be used at regular intervals to empty the bladder. Sometimes from incontinence or other causes the urine is passed in bed.

When the cases all round in the
[illegible] it is equally [illegible]
[illegible] of the tedious lingering
complications of [illegible]
and it passed it calls for a [illegible]
Frequent relapses may occur
about ten days after the state
[illegible] of the fever [illegible]
tongue is [illegible] but it is of
short duration though greater
in intensity than the first
attack. Sometimes after the disease
has disappeared the patient keeps
his bed and many lie on for
months in a great state of weak-
ness and usually die of asthenia
Unlike malarial forms of fever

typhoid fever can not be cured by the use of quinine which is valuable in the early stage of the disease as an antipyretic, and in very small doses afterward as a stomachic tonic if such is needed. The principle things in the treatment are good nursing and plenty of fresh air. With good nursing of course the patient will get all that is required for him. His diet should be of a liquid form. Milk is considered the best and lime water is used with it to lessen its aptitude to coagulation. Meat extracts are useful but should only be used when good milk cannot be

stained, as they are apt to excite a condition of diarrhoea if used to too great an extent. Towards the latter part of the disease when ulceration has diminished or almost entirely gone eggs nicely cooked can be used as food which is very easily digested about this time. The symptoms are treated as they arise as I have said before there is no specific treatment for the disease and it must be allowed to run its course. Opium is used to relieve pain and stop peristaltic movement of the intestines as well as tendency to mild insomnia. Cold sponging the wet sheet and cold affusions are used to some extent in reduc-

[illegible] temperature as well as the internal antiseptics, if there is constipation on the [illegible] day it is well to give a mild laxative such as Castor oil or sulphate of magnesia to remove all fecal masses so that they will not irritate the already inflamed and congested mucous membrane of the intestines, but great care should be exercised in giving even such mild remedies as these as they may set up a very obstinate diarrhoea. A saline laxative will somewhat relieve the congestion by extracting the fluids and forming watery evacuations. Headache should be treated by cold

applications and the hair should be shaved off carefully in the disease so that the applications can be conveniently made. Acetate of lead either by the stomach or rectum is useful towards the diarrhoea or dysentery, but the most important thing is that the patient should be in a room where there is good ventilation and always plenty of good fresh air. Tannic and tannic acids are both used with great advantage in the diarrhoea of typhoid fever. Hemorrhage from the bowels is one of the worst symptoms of the disease, and should be

tended young girl by the hypodermic method, and in fever time by the mouth. Ice applied over the right iliac region is also a good remedy. Alcohol is not required unless the pulse reaches 110 or 120 and then should be given in small doses frequently repeated. In perforation get the patient under the influence of opium & keep him in almost a narcotic condition. Turpentine is also useful to relieve tympanites. The mineral acids do a great deal of good as the blood in high temperatures increases in alkalinity owing to the increased waste of tissue. Hydrochloric acid causes the coating on the tongue to

gradually disappear and finally it exerts a healthful influence along the whole course of the canal. After quinine to reduce temperature antipyrin is very good. If cardiac depression occurs use alcohol.

The most careful treatment of symptoms as they arise, and careful nursing is absolutely necessary. With these the patient will stand a fair chance of recovery.

Thesis.

W. F. Chirnup.

Class of 1887.

19p.

Measles.

Measles, or Rubeola, is a disease from which few persons escape. It is a disease of childhood or training, but may occur at all ages. It is liable to recur in infancy of the mother than in children who have passed the period of dentition.
A second attack is of rare occurrence.

The disease is characterized by an eruption of red spots accompanied by a catarrh of the mucous membrane of the air passages, with fever of a greater or less more. It is infectious and contagious, prevailing epidemically

endemically and epidemically.
Authors in general divide the disease into three stages, first that of invasion which ends with the eruption making its appearance. Secondly the eruptive stage and thirdly the stage of decline or desquamation.
Etiology - Some attribute the origin of the disease to a micro-organism and with more or less foundation but have not as yet been able to prove the assertion. Clinical evidence shows us that it is one of the most contagious diseases of this kind, whenever exposed to the person unprotected

by a previous attack. There is no authentic evidence that it ever recurred spontaneously. It is known that the blood, the mucous secretions especially the nasal and uterine, the tears, and perhaps of urine, are the causes of inoculation. It is probable for the disease to be conveyed from one place to another in clothing and in blunder. The exact nature of the poison is still unknown.

Symptoms—

This disease usually occurs from nine to twelve days after exposure, and with such symptoms as usually occur with Milk

general inflammation of the mucous membranes, viz: cough, coryza, malaise and dull aching pains over the body with some loss of appetite & thirst. The eyes are painful & suffused. Redness in the cheeks and brilliant appearance. The cough at first is dry and painful, distinctly croupy. There is a slight acceleration of respiration accompanied by some difficulty or no pain. If auscultation be practiced in the early stage we find the vesicular murmur somewhat harsh in character and dryness. Dullness and sibilant rales later on dulness

of a typical rash. These symptoms are depending upon the severity of the disease for their character and quality. If patients complain of headache with dull pain in the forehead or under the [illegible] irritable [illegible] to the bowels. With these local symptoms while reaction occurs the temperature rises to [illegible] pulse 110 to 130 per minute. The fever in the first stage of measles is not uniform being marked by exacerbations and remissions. The tempera-

fever being up in the evening and down in the morning. The face is flushed and somewhat swollen especially during the exacerbations of fever. The pulse is frequent [illegible] and neither something to warrant a diagnosis in commencement of scarlet fever occurs only occasionally in Measles.

The duration of the fever varies in different cases, [illegible] ing about four days. [illegible] ordinarily it is more protracted [illegible] occurrence of the desquamation. Some function in the economy of nature, unable as yet to be

[illegible] from [illegible]. The con-
tinuous action of blood to the
surface and thus retard the
circulation in the minute [illegible]
[illegible]
[illegible]
[illegible] the [illegible]
[illegible] extending [illegible]
[illegible] and [illegible]
[illegible] from twenty
four to thirty six hours in
the [illegible] the whole [illegible]
[illegible] as indistinguishable
[illegible] more than a [illegible]
[illegible] which increase
in size and number becoming
[illegible] and more distinct.

The [illegible] of the [illegible]
[illegible] is [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] of [illegible] [illegible] to the
ear at [illegible] - In further [illegible]
we frequently have [illegible]
of [illegible] continuous or [illegible]
modes of motion; the appear-
ance being produced by the
confluence of the eruption -
A slight elevation of the eruption
is apparent to the sense of touch
and the uneasiness of the skin
is felt in passing the ends
of the fingers over the eruption
bonds - In the commencement
of the eruption the local and

constitutional symptoms are referred to assume their particular severity. On the second day after the eruption there is some abatement in the symptoms pulse rate and temperature decrease cough less frequent and countenance flushed and swollen appearance of face is less apparent. At end of the third or fourth day the rash has disappeared in the order in which it made its appearance. With this the fever ceases and only a slight and painless scrub remains for a few days. The face remains redder than usual.

In the disappearance of the eruption the desquamation is uniform. It is characterized by a similar furfuraceous exfoliation of the epidermis not so great however as in Scarlet fever. Desquamation occurs between the fourth and seventh days after the commencement of the eruption. The eighth and ninth of the desquamation is [illegible] as not to be observed.

Complications:-

These are [illegible] - [illegible] of the success of the physician in the manage-

much of Measles depends upon a correct diagnosis and recognition of them whenever they may appear during the course of the disease. The most frequent of these complications are Bronchitis and Broncho-pneumonia. Slight Bronchitis is uniformly present in Measles but if it increases so as to interrupt respiration, and become a source of danger, it is important to [illegible] action. This as well as Pneumonia may occur at any period of Measles, but is usually found in the first stage - and [illegible] may [illegible] the regular eruption

disease is the rash; if in some of often causes the patient to die. When it occurs during the essential anemia the acute bronchi. Most in frequency is Entero-colitis as a complication. These diseases will vary in the course of disease give us their own peculiar signs and symptoms. Eye troubles frequently complicate tuberculosis, some more or less con junctivitis but of more serious proportions that relieve it in treatment for its relief. Cataracts and fistula also occur, but very rarely.

Nicotiana:- Poisons of the nicotine
first more of diseases. The al
Tonics. Symptoms. The fundamental
and these are such as have
ever independently of any acute
internal or blood disease. The
first three not [illegible] the
Nasalis or Coryza or Mild Bron-
chitis. The varieties of determinate fever
are of inflammatory appear-
ance of the eyes. The greater de-
gree of fever in the individual with
morning remission and evening
exacerbation. In first stage there
is redness of the face and
with fever. The catarrhal
or inflammatory should treated such

an error. Sometimes a rash which is sometimes visible in appearance in Roseola appears the rash follows almost immediately after the fever has ceased, sometimes it comes on the whole side. Although the local appearances seem to indicate an error in diagnosis. Varicella is the most like of the eruptive fevers, vesicular, readily mistaken for it, but it is the rash of pemphigus to alter the whole appearance of the diagnosis, a few days will suffice to show the distinctive characters of herpes and varicellous eruptions.

The presence or absence of constitutional symptoms, the character of the eruption and the general feel under the finger in internal cases will be as discriminate between the disease on the commencement of the eruptive stage.

Prognosis:— Favorable, provided no serious complications arise. With internal complications complication the disease becomes much more grave. The prognosis is less favorable in bullous cases with severe eruption or the eruption appearing at a late period and then in less conspicuous equivalents of the disease. Recovery and death

acceleration of the pulse and it may indicate an impending collapse. Hemorrhages often occur in the course of malignant form of scarlet fever. And when they occur spleen the central, central and cerebral and in Coma and death.

Treatment. – Uncomplicated Rubeola requires little medical treatment except palliative. – Patient should be kept in an atmosphere of uniform temperature of about 70°. Currents of air and sudden alternations of temperature are dangerous. – The diet should be light and mainly liquid.

If the rash of patient presents

To prevent attack ~~[illegible]~~ from [illegible] and [illegible] [illegible] reduced to a severe complication [illegible] they must be more sustaining -
Stimulants of wine and brandy have resorted to when necessary during the two or three weeks succeeding an attack. None should be taken to avoid or prevent a cold or sudden decrease of temperature, since during this period there is great liability to inflammation of the mucous tracts -
The cough may require treatment since it worries and disturbs the patient - Mucilaginous [illegible] of flaxseed tea or solution of

gum acacia, dissolved in lime
juice may be used. Some of
cough powders, or the Mixtura
Glycyrrhiza composita may be
given occasionally. Allay the
irritation and diminish the
frequency of the cough. If
temperature rises, look out
lest there be pneumonia in
sufficient doses. As the chief
danger in phthisis is the auto-
inoculation of the respiratory tract:
local treatment directed to the chest
is important. We may cover the chest
with oil silk in severe cases.
The complications are to receive ap-
propriate treatment as they arise.

C. S. Clark!

Session 86-87.

18[illegible].

Hygiene and Medicine.

If we would have our endeavors in the healing art crowned with the greatest possible success, we must be intelligible in our efforts to appreciate ourselves with the exact nature of the methods with which we are to deal.

In other words a correct knowledge of the subject comprehends. This having made ourselves familiar with the functions of the various organs in health, this is simply preliminary and they should except in some rare cases.

For when an organ fails to functionate, or when it does it in an imperfect manner, we have a condition of disease. Hence we [illegible] we know what [illegible] is, [illegible] know disease, and know to our satisfaction where is the fault.

The next matter that should claim our attention is the cause occasioning such disease, and the means which nature suggests for a cure.

We should not content ourselves with merely prescribing some medicine or compound,

but must go much farther in remedial measures if we expect to do the greatest good to our patients.

When we find in the body evidences of disease of one, or several organs, we may safely infer that the laws governing that organism have been disregarded: That by improper living we have imposed on that organism a duty or burden which it is unable to perform. It is marvelous sometimes to to know or realize how many indiscretions the energies of the system can overcome's

even when repeatedly practiced for a long time, and we find many that with strong organisms, who, failing to appreciate the importance of such a blessing, daily expose themselves to exposure and causes of the worst kind and often without feeling the ill effects perhaps for many years!

But sooner or later, the accumulative effects of this debilitating and disease producing influence will cause the vital powers to suddenly, or it may be gradually, to give way, and the individual may die ——— of the continued

imprudences.
For so wonderful is the human organism that if the laws of health are but faithfully [illegible] obeyed, many of the existing causes of disease, to which the weak and debilitated so easily succumb would be speedily conquered; and many times when the disease has not advanced to an incurable stage, the reparative energies of nature are so great that if the sufferer will cease his indiscretions, a return to a state of health will often follow, even without the employment of medical agents.

Realizing this, we should make it a practice, not to allow the hurry and bustle of daily practice to cause us to forget or ignore this fact, and we should not think of dismissing our patients without inquiring as to their habits, and to give such advice as may be necessary, and not rely on a few doses of medicine to overcome the disease as well as the effects of a past and future injudicious manner of living.

It is true that by the above careless indifference we may often give imporary relief, or

may have the disease present in some other form.
But if we would have the best results we must [illegible] the [illegible] to remove it, [illegible] give the reparative energies of the system a chance to do their work, [illegible] the body [illegible] come the evil effects of their interference.

The causes of disease [illegible] which we will daily come in contact, are Predisposing and Exciting. And a mention of a few of the most important will serve our purpose here.

Predisposing causes may be either congenital or acquired.

Inherited - Scrofula, Phthisis, Syphilis, Diminished vital force or defective nutrition &c.
Acquired - Nervous and sexual disorders, catarrhs, lung troubles, rheumatism & disorders of the digestive organs.
Exciting causes. - Exposure to cold, sleeping in small & poorly ventilated apartments, wearing insufficient or unsuitable clothing, want of proper exercise in the open air, Eating too much or too little, unwholesome food, overtaxing either the body or brain, dissipation, intemperance, irregular habits &c.

It is unnecessary to designate from these, and many other causes, not here mentioned, generate and perpetuate human distress.

While some assign the cause to an overdone or phlegmatic condition of the nervous system, yet this seems to be rather the effect than cause, resulting from the sources now [illegible]. As we could rationally expect any physical organism to be overdone and its energies exhausted.

The function of the nervous system is to convey sensory impressions to, and motor impulses from,

the brain; to co-ordinate the
functions, regulating the
circulation of the blood to, and
the action of the different organs
as the process of digestion, ab-
sorption, assimilation, and as
physical or mental exertion
may demand.
And that these functions shall
be carried on properly, it is nec-
essary that the body at all
times is supplied with pure
vitalized blood.
That a vitiated state of the
blood, from the imperfect working
of the various emunctories, fail-
ing to eliminate the products

of the retrograde metamorphosis of tissue, by improper or insufficient oxidation or a deficiency in the supply of pure [illegible] [illegible] vitiated and devoid of the vital principle will not circulate with its proper or accustomed freedom, nor will it generate the force and energy sufficient to sustain prolonged and exhausting labor: and that the natural results of such deficiency will be to render great masses more susceptible to disease, will be seen by all who are familiar with physiological processes.

So long as we have a well balanced circulation of pure blood, disease is almost impossible. While on the other hand if it is deficient in its vital elements & sluggish in its circulation, we have a suitable nidus for contagion & all manner of disease.

Also the recovery from injury will be slow & tedious, or it may result in gangrene, degeneration, &c. because the reparative energies & nutrition of such an organism will be unable to carry on the healing process.

So from a [illegible] point of view to cure, relieve, or prevent disease, it must be continually borne in mind that it does not consist solely in the administration of medicine, but requires strict and faithful attention as to the origin, and to the removal of the cause, of the disease; and to always bear in mind that Nature is the "great healer" and our best endeavors will be to merely assist nature in her work.

We could not hope for the healing of a wound or to cure an inflamed eye by internal

medication while a foreign body still remains to keep up an irritation; yet it seems to be so rational to attempt the cure of many other diseases by medicine alone. Rest, quiet, good food, sunlight & pure air are admirable restoreers. Any by a judicious use of these agents we may not only expect to relieve the sick & suffering, but also to restain & control inherited tendencies to disease.

Without such attention, even we can not hope to restain the rapidly increasing tendencies

& phthisis, nervous diseases, scrofula &c.

While a large number of our patients & the great majority of people generally, remain or continue to be merely ignorant of the laws governing a perfect & well balanced physical development, or knowing are indifferent & careless concerning their general health, places a great burden on the shoulders of the physician who is called on more than mere surface work in therapeutics & surgery.

It is true, we often see good & [illegible]

use of medicine alone, but how often we find that we have thus only given temporary relief and the malady returns or presents itself in some other form.

But while we attempt to show the good resulting from hygiene it is not our purpose to depreciate the value of medicine in any degree. But if we had to give up [illegible] think we could best sacrifice the medicine, if we conscientiously regard the good and welfare of our patients. But we can by

a judicious combination of both these agents yields the very best results. Thus our efforts for the relief of suffering humanity be always crowned with the greatest success!

Fever

By [illegible]

[illegible]

36 p.

[illegible] and methods of com-
[illegible], and is
known by names [illegible]
[illegible] different [illegible]
[illegible]
[illegible]
[illegible] the first and
[illegible]
[illegible]
[illegible] Pacific [illegible]
[illegible] lies, and [illegible]
[illegible] at Panama [illegible]

the diseases to which are
amenable to specific treat-
ment [illegible]
so commonly [illegible]
[illegible]
[illegible]
of the disease exhibiting
an accounting of [illegible]
hydrophobia and all-
mentions. Usually the
[illegible]
terms or [illegible]
by hydrocyanic [illegible]
[illegible]

ll.

[illegible]

[illegible]

[illegible]

third

[illegible]
[illegible] and [illegible]
[illegible] are [illegible] and
[illegible] and [illegible]
[illegible] body; this condition
[illegible]
[illegible] of fluid which
[illegible] cease
[illegible]
body cease and
[illegible]
[illegible] come
[illegible] all
[illegible]
[illegible] the [illegible]

[illegible]

... vernment. Upon the

[illegible]

[illegible]

[illegible]
[illegible]
[illegible]

[illegible]

[illegible]
[illegible] and [illegible]
[illegible]

[illegible]

[illegible]
[illegible]
[illegible]
stated that [illegible]
of the [illegible]
to secure [illegible]
upon the [illegible]
[illegible]
[illegible]

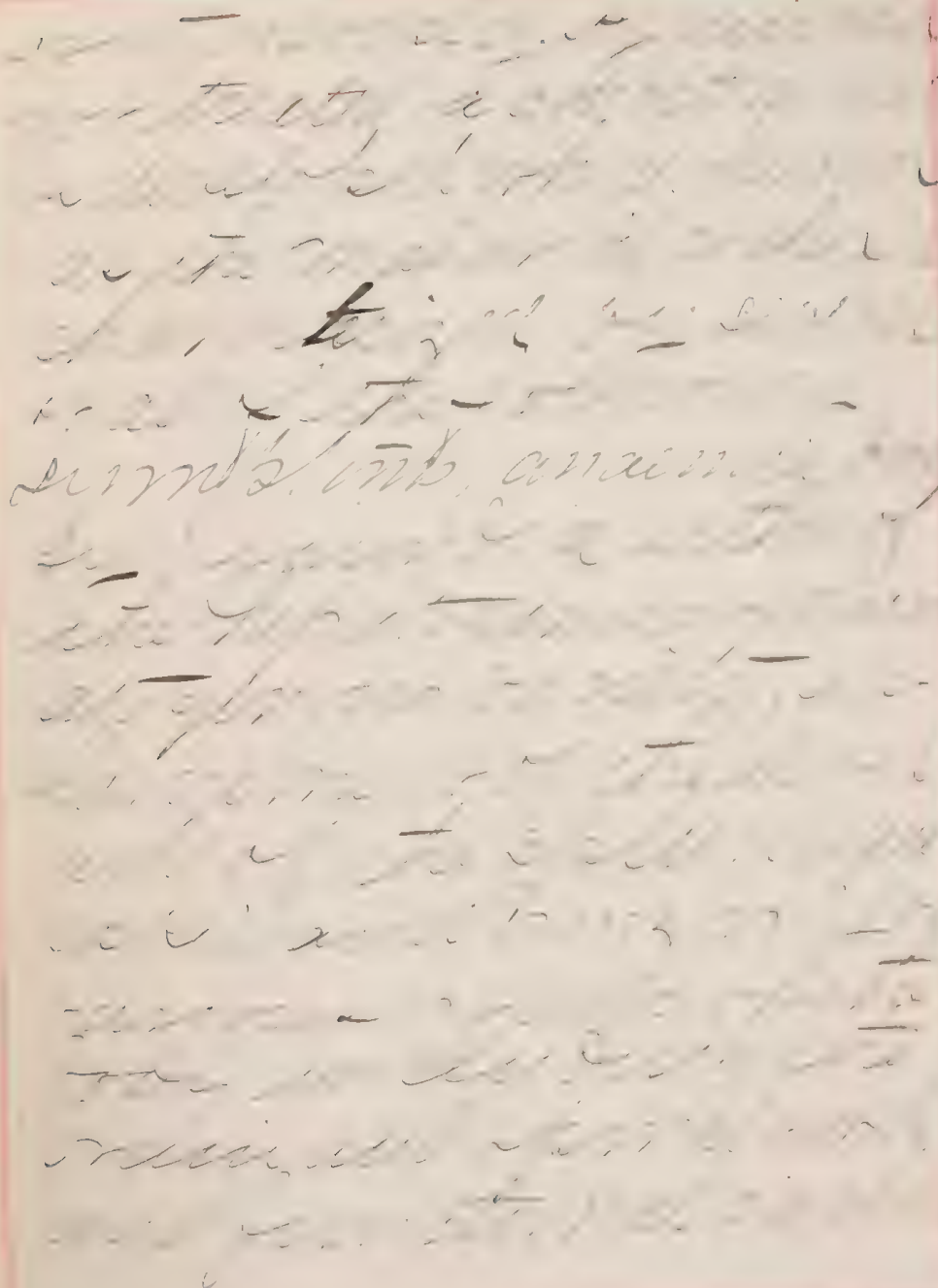
To suppose that [illegible]
[illegible]
[illegible] to secure the [illegible]
[illegible]. The [illegible]
of the power [illegible]

[illegible]

to the

[illegible]

rather than in Ephesus



surfaces with vegetable
[illegible]. Connecting
at the crest is a [illegible]
by means intervening
cultivated walls [illegible]
and walls spread over
substance of the [illegible]
of the fluid [illegible]
[illegible] of the [illegible]
[illegible] spirochaetes [illegible]
[illegible] a regular
[illegible] of a
[illegible] the [illegible],
the planting of the
cellular tissue
[illegible]

Little effect which
continue to attract
attention by the unusual
prolongation of antispasmodic
dose during the
paroxysm, the best
results are obtained by
administering such
a dose (eight or ten
grains) immediately
after the paroxysm
is over, repeat this
every two hours
[illegible]

[illegible]
[illegible] of the [illegible]
[illegible] should
be [illegible] every [illegible]
[illegible]; the last
[illegible] [illegible]
[illegible] or two [illegible]
[illegible]
[illegible]
[illegible] and
on the seventh, [illegible]
length and breadth
[illegible]
[illegible], and [illegible] dull
[illegible] and
[illegible], therefore
[illegible]
[illegible] [illegible]

[illegible]
[illegible] fluid, [illegible]
[illegible] twenty [illegible]
[illegible] dose [illegible]
[illegible] or emulsion; the liquid
extract of [illegible]
of twenty-[illegible]
[illegible]
five to the [illegible]
is malarial [illegible]
[illegible] tedious [illegible]

[illegible] given [illegible]

[illegible]

[illegible]

[illegible] when the admini-
istration of the [illegible]
[illegible] was [illegible]
[illegible] period of diarrhoea [illegible]
[illegible] haematoma [illegible]
[illegible]

[illegible]

[illegible] Hydra [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

ina of [illegible]

Mitral and [illegible]

the Left Auric [illegible]

and the Aortic are [illegible]

opening. The blood [illegible]

[illegible]

the Auriculo-V [illegible]

[illegible]

the Pulmonary orifice [illegible]

nary Artery to the L [illegible]

culating through the [illegible]

it is oxygenated a [illegible]

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

the body; the Tricuspid, Pulmonary, Mitral and Aortic Valves guarding respectively the orifices in the order named, and when the blood has pas[illegible]
[illegible]
[illegible]
traversed. The clo[illegible] of the two Auriculo Ventricular valves contributing with the impulse of the heart to form the first sound, while the closure of the

[illegible] and [illegible] [illegible] [illegible] [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] must be the [illegible] [illegible]

resulting from any alteration in

their condition. So [illegible]

[illegible] regard the [illegible] [illegible]

[illegible] [illegible] [illegible] [illegible]

[illegible]

[illegible] [illegible] [illegible] [illegible] [illegible]

[illegible] [illegible] [illegible] physician [illegible]

and so popular is the dread of

"Heart Disease" we may say that

one of the laity discovering he

has heart disease invariably thinks his

[illegible] instead of [illegible]
applied to the latter is to stro[illegible]
[illegible]
along to a case, yet the bod[illegible]
[illegible]
[illegible]
it being [illegible] attracting its
gravity, the sl[illegible] of t[illegible]
disorder [illegible] [illegible] will [illegible]
[illegible] of organic [illegible]
[illegible]
[illegible] stupor [illegible]
[illegible] [illegible]
shin and gin [illegible]
[illegible] for their ability is not
present as the [illegible] [illegible]

[illegible]
[illegible]
ing to complicate its intricacy,
yet though this means is usually
employed with the thought of
[illegible]
[illegible]
[illegible]
vestigation revealing some or-
ganic involvement.

Causes of Valvular Disease.

The prime factor in the causa-
tion of Valvular Disease is the
Endocarditis incident to Rheuma-
[illegible]
of inflammation are set up, veg-
[illegible]

[illegible]

imation of the pups or similar

by its head cut off the pup

flutters loosely in the blood out

vent. [illegible]

[illegible]

[illegible] in proport[illegible]

the several parts are [illegible]

[illegible] process completed the [illegible]

ind in such close apposition to one

opposing remains consolidated

offering resistance to the current

of blood and thus producing

respectively as consequences the

coagulation and obstruction and

the infiltration of Fatty or Calca

ing softening and weakening for

[illegible]

[illegible] has got [illegible]
considerat[illegible]
circulation; it is our [illegible]
impediment to the [illegible]
trade [illegible]

consequent backing and rise tension behind and lessened amount [illegible]
this is applied to all the veins
thus a lesion at the Aortic
also causing regurgitation the
left Ventricle hypertrophies from
the constant demand upon it
the same pressure extends back
[illegible]
other chambers of the heart, the
lungs congested and later the
liver also. But to counteract this
force the heart accommodates itself to the task, its over distended
cavities dilate to accommodate the
increased amount of blood re-

[illegible]

any undue [illegible]

posing upon the heart additional

labor such as an inflammatory

[illegible]

embarrassing the circulation any

disease of the heart structure or

any disorder lowering the vitality

[illegible]

the heart early to succumb with an

[illegible] to paralysis

dissipated. The labors most

liable to give evidence of this fail-

are the Mitral and Aortic sounds
the greater frequency in the
[illegible]
[illegible]. The movement of the
[illegible]
and were pursuing at all most
equally secondary to those of the
left side, and thus I have the liberty to pass over those of the right
[illegible]
ing the Mitral being first in frequency I shall consider that first
and successively Aortic Obstruc
[illegible]
[illegible]
[illegible]

[illegible]

[illegible]

ing chances already enumerated.

Efficient compensation main-

ist for an invariable time and

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

sels, the heart unable to propel

the blood, venous stasis results,

the Lungs become congested and

in turn the circuit completed

secondary complications result

in the opposite side leakage from

[illegible] results take place, the patient [illegible]
cordial anxiety and the slightest
motion occasions much fatigue,
the pulse is small rapid and irregular, later the lower extremities [illegible]
al dropsy results, the Kidneys
fixed back upon Albuminuria
is present. Hypertrophy takes
place and the heart is much
larger than normal, absolute
and relative dulness being in
[illegible]
[illegible]
is in time and ward with great
intensity over the mitral area-

[illegible]
two inches below and one inch
to the sinistral side of the right
nipple and propagated toward
the apex, in the direction of the
blood current, and in favorable
cases this murmur may be heard
just anywhere under the angle of
the scapula.

[illegible]

Aortic changes in the Aorta extend
ing downward producing rigidity
[illegible]

erased in the large arts,
Crepitation here is audible
in the arteries - at the junction of
the third right costal cartilage
1st, [illegible]
or whistling or singing character and occurring with the systole. This may continue
[illegible]
work causes a rupture of the compensation and then various stages
Dyspnoea, cough, dropsy and death
[illegible]
Aortic Regurgitation, Hard
frequency, pulse in the as
[illegible] various conditions
of the valves are found, calcareous

[illegible]

[illegible]

[illegible]

[illegible]

...cature use... [illegible]

scribed by Sir [illegible]

a: gna like pains [illegible]

...the weather... [illegible]

...are included... [illegible]

...ter is, headache [illegible]

[illegible]

[illegible]

...for a long ti... [illegible]

...is in comp... [illegible]

sooner or later it... [illegible]

the same train of... [illegible]

result, the initial...

Rejaliscangestion dyspnoea
and cough, and on the
heart by hypertrophy
Incrustations had been
the beginning, during and
is heard in the apex
area, due to the heart being
forced the blood beyond
the orifice and the velocity
by of the valve allowing it
to pass back to the auricle
the murmur in diastole.

Mitral Stenosis, the last
frequent rheumatic valvular
lesion dating from an attack
of Rheumatic Fever.

do atrophies, Little blood is there
pale and cancer and
work. Occupation a fac-
tor as fit due to the great
[illegible] partly due to
[illegible] the [illegible]
[illegible] and [illegible]
dry, Co [illegible]

second to
the Primary
ordinance

[illegible]
[illegible] duration of [illegible]
treatment, as long as
compensation exists no more
as treatment is received
[illegible]
[illegible]
[illegible]
[illegible]
we should especially avoid
[illegible]
not only the cultivation incident
to this but also the disease
atmosphere,
acts very deleteriously upon
the mind, stagnation is
[illegible] should be avoided

sation, it bec[illegible]

[illegible] be, and a [illegible]

[illegible] tension that [illegible]

[illegible] is jarred by it a[illegible]

[illegible] this also render[illegible]

accurate diagnosis [illegible]

[illegible] we are obliged to [illegible]

sedatives to arrest [illegible]

and excessive action [illegible]

administration [illegible]

rad, or Acid Hydrocya[illegible]

[illegible]

[illegible] crease th[illegible]

[illegible] and pros[illegible]

[illegible]

the increased [illegible] of the [illegible]
and the resulting [illegible]
circulation [illegible] caused
the Coronary arteries [illegible]
[illegible]

[illegible]
[illegible] contraction increased strength
[illegible] of by which it is [illegible]
enabled better to bear up under the
difficulty. The [illegible] being
diminished and the arterial tension
increased, the tendency to the
outflow of serum is arrested and
the consequent liability to the
diminished. the body is more [illegible]
ly nourished, But even this [illegible]

difference. The use of anesthetics
[illegible]
modern science is making [illegible]
aside from producing rest [illegible]
arts and comfort of the weak
and sick. The Dispensary process
[illegible]
[illegible] to be awarded. The Prairie
[illegible]

Thomas M. Green

Long Green Md.

Feby. 1887.

exaggerated, [illegible]
labilities, or [illegible]
great [illegible]
labor, an [illegible]

[illegible]

Any condition [illegible]
ically or physical [illegible]
such centers [illegible]
[illegible]

[illegible]

[illegible] of social [illegible]
which has made [illegible]
[illegible] natural blood [illegible]
[illegible]

[illegible]

[illegible] and [illegible]

peaceful slumber [illegible]

[illegible] only [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

prevent the [illegible]
beef should be restricted to a milk
diet, and given for a few days [illegible]
[illegible], such as the [illegible]
in full doses three times daily
[illegible]

[illegible]

[illegible] bladder become [illegible]

[illegible] After one [illegible] has

been [illegible]

to increase until the [illegible]

[illegible] has come to [illegible] point, but

whether to begin a course of [illegible]

with Chloral Hydrate and Potass.

Bromide to be [illegible]

[illegible]

Thesis
on
Pericarditis
by
Dr. D. Corse

Feb. 14th 59

"Inaugural Dissertation"

on

— Pericarditis —

Submitted to the —

— Examination —

— of the —

Medical Faculty

of the University of Maryland

For the degree of Doctor

of Medicine by

W. L. Horse

Pericarditis, an acute fibrous inflammation of the pericardium characterized by sharp fever, pain, praecordial distress and disturbed cardiac action and circulation. It is also further characterized by some effusion which may be fluid or

fluid, and in consequence of the varied character of these exudations, sub-divisions are often made, such as the serous, fibrinous, sero-fibrinous, purulent, sero-purulent, and hemorrhagic form, but in some cases we have no effusion, we then have what is known as the dry form.—

Etiology. The causes of pericarditis are numerous, and range from simple cold, injury to the chest, to those diseases of which it becomes a complication whether the seat be remote from or in immediate proximity to the pericardium. Impure blood as a cause of pericarditis is recognized.

with the disease, also diseases of
have the same distinctive complication, are Cyanosis, Emphysema,
Emphysema, Chronic.

Morbid Pathology and Changes

In acute hepatic congestion the mucous membrane first becomes infected with blood, which may shed at a single or several points, and may become diffuse. The inflamed vessels do not allow themselves infiltration of serum, the follicles produced thickening and opacities as well as slight roughness. The mucous membrane becomes hypaemic most marked on the visceral side, followed by exudation of lymph giving it a rough, shaggy appearance.

Acute (Pericarditis) is the
the effusion of a serous
fluid with flocculi float-
ing in it, and some cases it
is mixed with blood and in
some rare cases the fluid is
purulent. The fluid may
undergo absorption with
resulting adhesions.
Symptoms: Pain about the
precordial region of an
acute, and stabbing character
increased by coughing and
breathing. The action of the
heart is increased, some
degree of palpitation, cough
of a dry character and
sympathetic fever.
2nd Stage or Stage of Effusion

Depends on the stage

depend upon the amount
rapidity of the effusion, when
the infiltration is serous
exudation has taken place,
the pain will pass away
but if the patient should
try to walk, then there
will be a tendency to
syncope. If the effusion be
large the patient will
sit up in bed and lean
his head upon a chair so
the hearts action may be
so labored.

Pulse is not to be felt bounding
irregular, a beat and then
a pause. When pericarditis
is due to Bright's disease

and uremia exists we have hydrothorax, pericardium, the effusion is generally large.

Physical Signs

The chief of these are determined by inspection of the chest, by palpation, by auscultation and by percussion.

The most important are: auscultation. By inspection you can see that the heart is acting irregularly, but on auscultation in the first stage, there will be a slight rubbing, which is synchronous with the action of the heart.

2nd Stage of Auscultatory Signs

When we have limited effusion
then place we have absence
of friction murmur first
yellow, then upwards, caus-
ed by the effusion that
has taken place. The heart
sounds are also dull, or in
some cases the normal
heart sounds are absent, a
splashing sound is also pre-
sent, synchronous with the
beat of the heart. If the dis-
ease goes on towards recov-
ery, we have heart friction return
of friction, due to absorption
of effusion the murmur is
soft in character due to
softness of the parts and
small amount of lymph. Ex-

Palpation Early Stage, Excited or tumultuous impulse, pericardial friction fremitus rare.
Effusion Stage, feeble or absent impulse and if present, its position is changed from the normal place
Inspection Early Stage Excited cardiac action is evinced by impulse.
Effusion Stage, feeble undulations or absent impulse; its position pressed or displaced upward, or rare downward, bulging of the precordium and chest wall.
Percussion Early Stage, Normal dullness change is not [illegible]

2nd Stage or Stage of Effusion.

Dyspnoea, dullness enlarged vertically and laterally and if considerable fluid be present, of triangular shape, with base of the triangle on a line with sixth rib, extending from right of the sternum to the left of the left middle narrowing as it proceeds upwards, to the second rib or above, which represents the apex of the triangle. The shape of the dullness is sometimes altered by the position of the patient being changed.

Diagnosis. The diagnosis of pericarditis can only be

determined by the physical signs and in some cases they may not be enough to force to a positive conclusion. Other signs are early delirium frequently very, then restlessness with more or less of an anxious expression of countenance. Quickened rather, labored breathing is often even early observed, and so is pain in the precordial region, directly, and or near the sternum, perhaps extending to the left shoulder, of an acute, severe and shooting character, increased by pressure or motion. Since pericarditis is frequently

depend upon a certain
class of diseases, as acute
articular rheumatism, Bright's
disease of the Kidneys, Cyanosis
or it is best that we ex-
amine the heart though
nothing ~~point~~ points to its
being involved. In Pleurisy
it can be diagnosticated by
the following. Let the patient
to take a long breath and
expand the chest, he can not
do this in pleurisy. In pleurisy
there may be a friction sound
or murmur caused by rubbing
of the pericardial surfaces
which synchronous with resp-
iration, but the friction
sound in pericarditis

succeeds with heart.
From dilatation, this trouble
has chronic history, results
in general venous stasis, the
cardiac sounds having the
same intensity over the entire
praecordia, while in pericar-
ditis, it is associated with
some acute malady; and
while the heart sounds are
indistinct or feeble at the apex
they both have their normal
qualities at cardiac base.
Hydro-pericardium presents nea-
rly the same symptoms as peri-
carditis, a differentiation being
possible only by symptoms
of the attack. In Endocarditis
we have entire difference in the

character of the physical signs.

Prognosis. In a great number of cases good, but very grave if it occurs with an incurable disease, Bright's disease and Cyanosis, it is generally fatal. In some cases the limit of fluid will be poured out so rapidly that it will overcome the heart, but if this does not occur and the stage of effusion has taken place the patient should not be moved, suddenly because it might cause syncope. All patients should be relieved about this, & prognosis for of the disease depends

Symptoms. If in simple form of the disease, if the patient be of a weak anemic form then prognosis is ~~a~~ bad. Treatment. If a very strong person has severe pains, use several leeches, but do not draw any blood, as bad letting is bad practice in these cases, because the amount of blood lost will soon be replaced with blood that contains more water, which would tend to increase the effusion. Mercury is but slightly used may do harm not advisable. Protect the patients chest by flannel, and warm poultices which should

then as chest can not bear
a very heavy weight without
some inconvenience. Lucos.
Quinine in large doses to abort
if the be commenced during
1st first stage the patient may
have better and in many
instances the attack may be
lessened in severity and in
some cases the attack will
be entirely aborted. Hypodermic
injections if the heart is not
too weak. If the pericarditis
is primary and not caused
by some traumatic trouble.
then put on anti-rheumatic
treatment, where the trouble
is secondary be sure and
take this plan of treatment

if rheumatism is the cause.
In stage of hyperæmia must expose patient to the cold when you make your examination. Anti rheumatic treatment, Salicylic Acid ℞ xv grs every half hour. it should not be given with the salts of iron as it incompatible, Tinct or Wine of Colchicum Root, should be given where there a tendancy to gouty inflamation, Soda Bi Carb grs xx Potass Bi Tart ℞ xx grs.
Tinct Opii gtts xx xxv to prevent over action of the heart and pain, it should be given at night in guarded doses, poultices at night.

number of cases nothing more is necessary, In some cases a blister is advisable over the precordial region, one about 3 inches square left on it is part for about 6 or 8 hours, when it is removed we will often find the heart sound very much clearer or increased The pericarditis complicated with Bright's disease has more effusion than that complicated with rheumatism, and in many cases we have to tap the pericardium, by means of the aspirator, run the needle between 5th & 6th ribs (just above the 6th) so that the intercostal vessels and other

[illegible] (third) a line drawn
midway between the left nipple
and left border of sternum. The
fluid should be removed
slowly, if not syncope will be
apt to occur out of 60 cases
treated this way 2 recover-
ed. In some cases where the
patient will not submit to
this operation or it is not
deemed advisable, a very good
plan is to give dose of Elat-
erium grs. ss, but as it is
very depressing, remedies
should be at hand to over-
come this. (stimulants.) In
cases where we have Purulent
pericarditis or air in the pericard-
ium, it cannot be treated [illegible]

[illegible]

*

*

[illegible]

[illegible] *

[illegible] † "[illegible]" [illegible]

[illegible] ‡ [illegible]

[illegible] a succession of attacks may [illegible]

[illegible] of the second [illegible]

[illegible] "Scale or [illegible]

[illegible] from four to seven days, sometimes [illegible]

a fortnight, or even longer, a fresh attack [illegible]

[illegible] to supervene upon one which is not [illegible]

[illegible]. In some instances the attacks alternate with intervals of complete subsidence of

two or three days' duration. Sometimes one sub-

---

* "Diseases of the Throat, Nose, and Lung Passages."

† "[illegible] of the [illegible]" [illegible].

‡ "Diseases of the [illegible]"

[illegible] after the dose [illegible] could
[illegible] stop; and there was [illegible]
of [illegible] of the [illegible].

Fortunately, this was [illegible] and
[illegible] appetite [illegible] [illegible]
[illegible] other has [illegible]
"Dr. C. O. R. Williams assures us that [illegible]
may be cured in forty-eight [illegible] by
almost total abstinence from liquids; but [illegible]
is a practice which in all [illegible]
have adopted, though it was [illegible] recommended about one hundred and [illegible]
ago by Dr. Richard [illegible]"* [illegible]
[illegible] drinks [illegible] before [illegible]
[illegible] useful in abortive [illegible]
in the dose of [illegible] or more [illegible]
to begin [illegible] of the attack and [illegible]

* [illegible] "Practice of Medicine."

[illegible] used in [illegible]
interest of the fever [illegible]
[illegible] been used for the same [illegible]
other remedies have been used [illegible]
[illegible] or exposed at intervals [illegible]
[illegible] of the attack and at a [illegible]
among them: Potassii bromidum [illegible]
over three or four years [illegible]
[illegible] relative [illegible]
[illegible] remedies [illegible]
with success [illegible]
nitrous, [illegible]
of the cold [illegible]
[illegible] but either [illegible]
abortive it, [illegible], even [illegible]
hasten the [illegible]
[illegible] of the [illegible]

[illegible] the stomach [illegible]

[illegible] treatment [illegible]

[illegible] to attempt to empty the stomach

[illegible] and also to guard against the [illegible]

[illegible] the future and this is found to [illegible]

[illegible] a chronic character.

For local treatment a simple compound of

bismuth subnitrate [illegible] gum

acacia and morphine sulphate is recommended

by Carter. Wagner uses the following suspension:

℞ Morphinae sulphatis [illegible]

Bismuthi subnitrate [illegible]

Pulv. amyli [illegible]

Or

℞ Zinci Oxidi [illegible]

Pulv. Amyli [illegible]

M. Sig. Use several times a day.

Alkaline sprays* are also useful. Bo-

* Many different forms of spray-atomizers have been invented, all of which have been [illegible] condemned.

[illegible] acid is [illegible] in [illegible]

4. [illegible] remain [illegible], [illegible]

on the throat which is [illegible] [illegible]

out through the nostrils.

℞ Acidi carbolici [illegible] [illegible] ℥ss.

Tinctura Iodini [illegible] ʒj.

Glycerinae [illegible]

Aquae amygdalae amarae [illegible] ℥v.

M. Sig. Use locally.

The nasal douche is a very efficient remedy. It may consist of a solution of water and common table salt in the proportion of a teaspoonful of the latter to one pint of the former. The temperature of the water should be 100° F. There may be added to this some astringent, disinfecting or stimulant substance provided that no chemical change be produced.

[illegible]

[illegible]

[illegible] man, which he uses without the [illegible]:

℞. [illegible]

Tinctura iodinae compositae [illegible]

Aquae amygdalae amarae [illegible]

Glycerinae [illegible]

Aquae [illegible]

Misce [illegible] ad [illegible].

[illegible] antiseptics [illegible] necessary to describe are confined to the administration of the douche, the use of the nasal or Eustachian syringe.

Many objections to the method have been raised by Roosa, Griffith and others. The most important of these is that unless care be taken there is danger of the liquid enter[illegible] the prot[illegible]

causing severe frontal cephalalgia or
Eustachian tubes or ear. The middle
may lead to otitis media and in some cases
the inflammation extends to the mastoid.
mentions another cause of complaint against
the douche. To use his own words: "Besides the au-
ral complications there is another objection to
the douche which, I think, has not been men-
tioned by writers, but which I have frequently
observed in those who have persistently and for
a long time made use of it; and this is a chronic,
relaxed and hypersensitive condition of the pi-
tuitary membrane, rendering the patient more
liable to attacks of acute rhinitis when sub-
jected to sudden atmospheric changes. Even
if certain measures be taken to prevent these
unpleasant consequences the use of the douche

[illegible] point is or is most useful.

Before attempting [illegible] a [illegible] or [illegible] should be made as if there is a [illegible] or ecchondrosis of the septum, or a [illegible] or cholyphi, while the fluid may flow freely into one nostril, it is likely that it will be impeded on the progress through the other side. It will thus accumulate in the post nasal nares and the continued pressure will force it together with the fragments of mucus detached from the unobstructed side, into the eustachian tubes or the frontal sinuses. We can avoid, therefore, before the use is made of the [illegible] to ascertain the true condition of the parts, and the patient should be instructed to blow the nose thoroughly and during the operation to avoid deglutition.

The temperature of the liquid as usually stated, should be 90° F., a little more than blood-heat; without other [illegible] ingredients. The douche, and some of the [illegible] should never [illegible] have been exposed, [illegible] sensation of [illegible] not used.

Scudamore directs that the height of the douche be from one to five feet above the head of the patient. I [illegible] however consider this to be too great an elevation and therefore advise that it be not higher than the eyebrows or the crown of the head of the [illegible]. The reason assigned for this is that coming from so great a height and consequently with a proportionate force the liquid [illegible] meet with an obstruction in the [illegible], would be more liable to [illegible] the

[illegible] and the [illegible]

[illegible] or [illegible].

Grape sugar [illegible] through the [illegible]

[illegible] in order that the fluid may [illegible]

[illegible] from the other.

Fraenkel insists that during the [illegible]

the patient produce the second [illegible] [illegible]

agrees with him with [illegible] [illegible]

than an escape inasmuch as "the desire [illegible]

ration that must gather would render [illegible]

lose the contact in pieces."

Leeter says that the density and the specific

gravity of the liquid used should be the

same as those of the serum of the blood, as

otherwise osmosis might take place. For this

purpose sodii chloridum is used. While this

is a very pretty theory it seems to me that th

[illegible] slight to cause such an effect.

In addition to the [illegible] other instruments which it is [illegible] have been devised for the treatment of [illegible] both acute and chronic. Among them are the [illegible] nasal syringe, the hot-water nasal syringe, compressed-air receiver, pump, and spray tubes, etc.

Another method of treatment mentioned in some text books and to which the medical profession generally should be [illegible] but little attention, is that of [illegible] remedies in the form of ointments. We see [illegible]

[illegible] particularly good [illegible] and will remain in contact with the [illegible] most dependent part longer than a sponge or [illegible], or a bandage, thus allowing greater absorption to be effected and at the same time affording protection to the membrane. This plan was suggested to me by Dr. [illegible] of this city. He attributes the greater part of the success achieved by the manufacturers of a certain patent medicine ([illegible]) to the form in which it is applied. The following is that employed by Prof. J. Lewis Smith* in the Out Door Department at Bellevue. Its alterative properties render it serviceable alike for strumous and syphilitic patients.

℞ Ung. hydrarg. nitratis ʒj
Ung. zinci oxide ℥ij M. [illegible]
Apply with camels hair brush three or four times daily.

* "Diseases of Infancy and Childhood," by J. Lewis Smith.

Gonorrhoeal Coryza.

This is most often met with in new-born children and is the result of contact with gonorrhoeal products during birth. It sometimes occurs in adults, principally mothers, women and nurses from contact with gonorrhoeal matter carried to the nose by clothes, handkerchiefs, and fingers. The symptoms are the same as those of acute, purulent catarrh. A diagnosis can be made only from the history of the case and by an examination of the suspected source of infection. The treatment is similar to that for gonorrhoea elsewhere.

Influenza.

This disease is also known as the Epidemic Febrile Catarrh, Contagious Catarrh

odia and in France la grippe. It is, however, most generally called influenza, the term introduced in the Italian outbreak of the seventeenth century. It is always a febrile disease, affecting all ages and conditions although children are more exempt than adults. Nor is it confined to the human race; horses, oxen, dogs, and other domestic animals are likewise subject to it. Sometimes it affects them before attacking the human species. It is remarkable for its great diffusion, often spreading rapidly over many widely separated countries. One attack does not protect the individual in the future. During an attack pregnant women often abort.

Aetiology. Influenza is undoubtedly due to a special cause like all other epidemics.

What this special cause is, and its nature, its source and its mode of action are unknown. Schonbein and others have attributed it to ozone in the atmosphere, Holmes to animalculae, and the late Prof. Leidy of Philadelphia to cryptogamic bodies. Whatever this cause be, it evidently exists in the atmosphere; but it was clearly shown during an epidemic in Boston in 1852 that it does not depend upon any appreciable atmospheric changes such as temperature. During this year nearly all the towns in the Massachusetts General Hospital were affected although a uniform temperature was constantly maintained throughout the wards.

Symptoms. Although acute coryza is a prominent symptom, the catarrhal inflammation

[illegible] is by no means confined to the mucous membrane. It may extend to the frontal and the maxillary sinuses, the lachrymal ducts, and the Eustachian tubes in the nasal coryza, but it frequently extends down the pharynx and the larynx even to the most minute ramifications of the bronchial tubes. It is, in fact, a general, not a local disease. The lungs, the skin, the intestines, the brain, the nerves, the dura, the synovial and other serous membranes are sometimes involved. Theophilus Thompson has shown that "there are several predominant varieties in the manifestations of influenza, one or more of which are apt to be prevalent in different epidemics. These are, 1st. Cerebral, characterized by vertigo, delirium, facial erysipelas and some

[illegible] bowels; 2nd. Gall. [illegible]
or [illegible]. 3rd. Pneumo-[illegible]
difficult and offensive respiration.
Intestinal, characterized by diarrhœa, mucous
stools and abdominal tenderness; 5th. Typhoid
characterized by great prostration, with depression of pulse and general symptoms of "typhoid and adynamic fever." Thus the symptoms
of this affection are those of simple pyrexia, frontal headache, a tenacious mucous
secretion in the air-passages which is expectorated with difficulty, insomnia, etc. together
with those of the complications above mentioned.

Diagnosis. In simple the complications and
the fact that the disease is endemic —
establish the diagnosis.

Prognosis. As a rule this is favorable.

[illegible] in age, [illegible] from a [illegible]
[illegible] forever. The duration of the disease is
[illegible] from [illegible]
six days. Tobin says that "the disease runs
through its course in from one or two days to
two weeks, or a little longer, a moderate average being four or five days." The acute catarrhal and general symptoms may subside, leaving bronchitis and a state of general debility. This may develop into phthisis or give rise to some nervous disturbance.

Treatment. This is substantially the same as that for simple acute rhinitis together with remedies suited to meet the indications of the complications. Tart emetics or ch[illegible] should be useful unless the patient be [illegible] advanced years. Blood-letting on the other

* "Practice of Medicine;" page 238.

food, he thinks is seldom, if ever, necessary. Wash, use purgatives, tonics and anthorling mixtures are beneficial. Diuretics are needed. Bronchitis, cerebral symptoms, intestinal disturbance, etc., call for appropriate treatment.

Apart from all these, however, another indication is to be met. This is a call for remedies to destroy the organizations upon whose presence the disease depends. For this purpose the sulphites, the bi-sulphites, or the hyposulphites of soda, calcium, or ammonium should be given internally, and the patient should inhale through the nose and the bronchial tubes dilute sulphurous acid water.

Idiosyncratic Catarrh.

[illegible] Asthma, or Cold; Pho[illegible] and Cold; Catarrhal Fever; [illegible] Catarrh.)

This is a form of catarrh that usually attacks certain individuals at a fixed time every year. These persons belong chiefly to the upper classes of society as poor persons whose occupation consists of manual labour seldom complain of it. The affection is rare on the continent of Europe, but common in this country. The late Dr. Geo. M. Beard* has shown that the disease is not unknown in the Southern States and Canada as was formerly believed, but that in these localities it is rare.

According to Dr. Morrill Wyman† there are two forms of Idiosyncratic Catarrh recurring annually in persons possessing a certain idiosyn[illegible]

* "Hay Fever, or Summer Catarrh." New York: Harper Brothers, 1876.

† "A Treatise on Vital Statistics." New York: Hurd & Houghton, 1872.

-crosy. The first is that known as "June Cold" or "Rose Cold" which commences in the latter part of May or the early part of June and lasts till the beginning of July. In England this is called "Hay Asthma" or "Hay Fever". The second form Dr. Wyman denominates Catarrhus Æstivalis. It ordinarily begins in the third or fourth week of August and continues until the latter part of September or even into October. The disease almost invariably terminates on the appearance of frost.

Aetiology. It is generally believed that the disease is caused by the inhalation of some irritating substance. This may be of vegetable origin as the pollen of certain flowers, grasses and trees, or it may consist of the emanations from the body of the horse, of the cat, the rat

-bol, Dr. Beard and Prof. Ch. [illegible] so in support of the latter view. The disease is similar to the effect produced upon some persons by the inhalation of powdered chrysanthemum. But as all persons are not affected by these emanations (either from the plant or the animal), to produce the phenomena classed under the terms Hay Fever, Rose Cold, etc., there must be present in the individual suffering a peculiar idiosyncrasy which, according to Drs. Roe and C. E. Tyson, "is accompanied by a chronic hyperaesthesia of that part of the nasal mucous membrane covering the inferior and the middle turbinated bone, the middle meatus, the floor of the nose and that part of the septum between the limits of the olfactory membrane."* The observations of Dr. Beard, [illegible]

* "College and Clinical Record", July, 18[illegible], and "Indiana Medical Monthly," of same date.

heredity as a factor in this idiosyncrasy. Wagner classes this affection among "Vasomotor phenomena due to Vascular Affection."

Symptoms. The symptoms are similar to those of an aggravated case of coryza. There are sensations of chilliness, pyrexia, a copious discharge from the nostrils, and insomnia. The disease often extends to the frontal sinuses causing a dull frontal cephalalgia and to the lachrymal ducts and the Eustachian tube. The pharynx and the larynx are also involved and there are frequently present considerable bronchitis and asthma.

Diagnosis. A correct diagnosis must be based on the symptoms and the history of the case. As the disease is one that occurs annually, very little difficulty will be experienced in

[illegible] after the [illegible]

attacks.

Treatment. Patients should [illegible] to seek immediately before the expected attack a locality in which they will not be subjected to the exciting cause. This may generally be found in the mountains in certain states, the sea coast, or on the open sea at least [illegible] hundred miles from the shore. When a change of residence is not convenient, Hagner advises the use of the following sedative mixture:

℞ Sodii Bromide		℥j.
Ext. Ergotae Fl.		ʒj
Syr. Limonis		ʒss.
Aquae Dest.	q.s.u.f.	℥iv

M. Ft. Mist. Sig. ℥j in aqua ter in die.

Locally the same authority uses a [illegible]

[illegible] of Boracic acid, 10 grains to Aqua [illegible] ℥i followed by an insufflation of

Zinci Oxidi	1 part
Pulv. Amyli	6 parts.

To alleviate the pain consequent upon the insufflation, Seiler recommends the snuffing of a powder composed of gum acacia, quinae sulphas, bismuthi subnitras, and morphinae sulphas. Before the use of this, however, he advises the cleansing of the nasal cavities, using for that purpose Dobell's solution of which the following is the formula:

℞ Sodae bibor.	} ãã	℥ss
Sodae bicarb		
Acidi carbol.		ʒiss
Glycerinae		fl. ℥j
Aquae font.		O ℥i M.

On account of the swollen condition of the nose, the nasal bones should be raised with caution. Nor should the nose be blown hard but only wiped, sneezing ought also to be prevented as both these acts produce irritation of the Schneiderian membrane. The use of snuff frequently mitigates the suffering, especially that from the frontal headache.

Nourishing diet, exercise, and vegetable tonics (particularly quinia) are often called for. The attacks of asthma may be relieved by cold applications to the back of the head and to the forehead. Tanner recommends the following antispasmodic mixture. Bichloride of mercury — a.

℞ Tincturae Lobeliae Aetheree ℥ iij

Vini Ipecacuanhae ℥ ij

Misturae Ammoniaci ad. ℥ vj

M. Sig. ℥ j every six hours.

℞ Infusi Rosae ℥ss

Spiritus Ammoniae Aromatici ℥j

Tincturae Camphoraae cum Opio ℥ss

Aquae Camphoraae q. s. ad. ℥iv

M. S. ℥j every half hour until the pain is relieved.

We also advise the smoking of tobacco, or the inhalation of the following:

℞ Creasoti ♏ xxx

Aquae Pullientis ℥viij. Misce. S. g. Once or twice daily.

To destroy the vegetable emanations supposed to cause the affection some such agents as thymol, alcohol, carbolic acid, salicylic acid, sulphurous acid and quinia should be used.

During the attack only palliative treat-

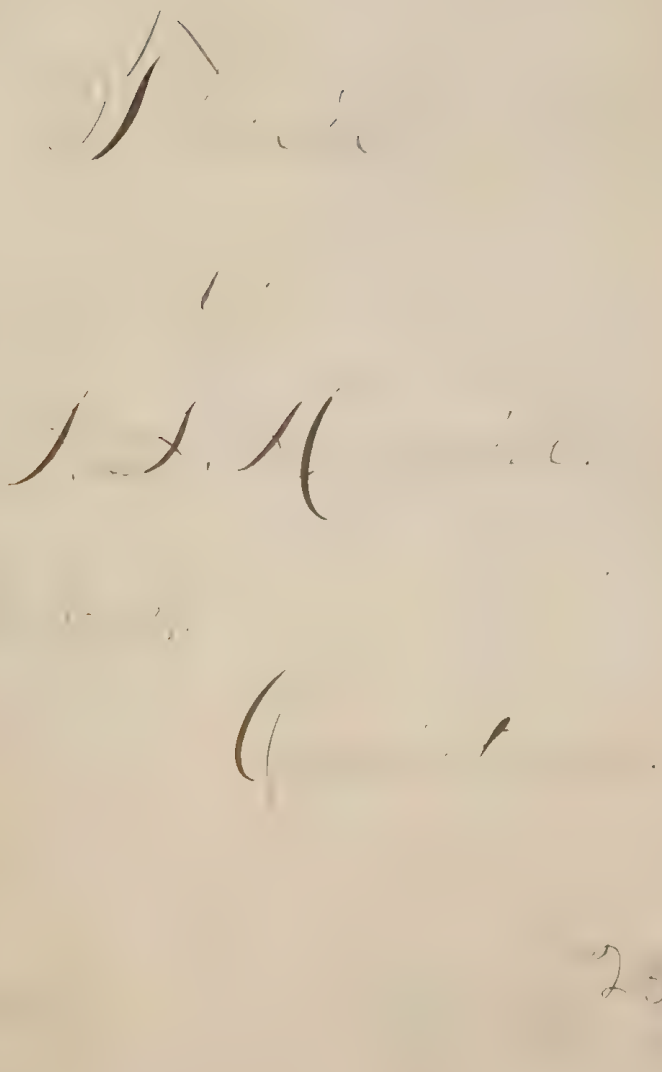
must should be employed as the time for active measures is not then but during the winter or the early spring months, at which time the treatment should be directed to the cure of chronic rhinitis with hypertrophy.

Drs Lyons and Roe, in reviewing the course of reasoning to which reference has already been made (page 28), have reached the following conclusions in regard to treatment. They are glad to say, "First, whether the measures proposed should be employed during or after the attack. First. "Organic alteration of these tissues that hyperaesthesia, preventing at the same time what symptoms the patient may be liable to in case of an access. Second. "A destructive agent will induce that organic alteration, but the galvano cautery is by far the

[illegible]; [illegible] effect [illegible] of large [illegible] seen used in [illegible] and "In order to obtain a satisfactory result, a sufficient number of applications must be made, covering the entire extent of the eye sensitive surface, without which the result will be doubtful."

As regards prophylaxis, Prof Colmbetz found relief in his own herpes from the injection of a weak solution of hydrochlorate of [illegible]ia (1 part to 100) and he was enabled in this way to prevent the attack the following year. Others have tried the same with success, although in some instances it has failed

Finis.



the abdomen by

the great wind which worst of a

The Shrewsbury Mercury Wrote

[illegible] House Found

Esther is more free from Faults

in Characters where Shorter

[illegible] I think it

[illegible]

that most writers agree that to

[illegible] least Danger attendant the red

[illegible] tradition of Esther than other

[illegible]

[illegible]

with Carbolized silk or Cat gut. The
Omen on the Anciliary side [illegible] and
be examined, The Arteries should be
[illegible]
wrung out of Carbolized water, all
[illegible]
this is done the wound will be
ready to be closed, This is to be
[illegible] by the [illegible]
sutures, the deep sutures should in-
[illegible] the [illegible]
[illegible] that the subcutaneous
should be [illegible] the [illegible]
first have [illegible] [illegible]
[illegible] that [illegible]
in the future only a drainage
tube should be inserted and [illegible]

like does very well this should
[illegible] Douglas's [illegible] the
[illegible] and should be kept [illegible]
with a cork to prevent air from
[illegible]. After the administration the
patient should be kept warm
by the use of a fire, and this
is best given by the rectum. If
the stomach is at fault be irritable
and in that case nourishment
should likewise be given by the
rectum. The bladder should be
evacuated thrice or four times per
[illegible]

[illegible] Nourishment should
[illegible] and [illegible] these should be
[illegible] Vomiting then should
[illegible] be [illegible]
[illegible] Within the first twenty-four
[illegible] hemorrhage is to be feared
[illegible] from fourth to
[illegible] by Septicæmia. Should
[illegible] ing should be removed, and
[illegible]

[illegible]

if it was [illegible] the

wound will [illegible]

[illegible] pedicle ligated again, this

of course is [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] should [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] by the catheter [illegible]

[illegible]

[illegible] by the use of [illegible]

[illegible]
[illegible] in bowels
it not only relieves pain but to
a great extent prevents the spread
of [illegible]
[illegible] by
mouth or rectum, the latter is a
very good way it is as readily
absorbed as if in stomach
and also has more effect in
[illegible]
Should temperature [illegible] of [illegible]
102 or 3 it should be reduced by
cold sponging or the cold bath
[illegible]
[illegible]
[illegible]

[illegible]
rence by strictly adhering to
the antiseptic method all through
the operation, this is done by the
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
should at once inject a warm
solution of Carbolized water [illegible]
[illegible]
into the bladder as [illegible]
the drainage tube which should
be a rubber tube resting on the
[illegible]
the temperature should [illegible]
[illegible] above 101 or 3 days [illegible]

vide in 5 drop doses every 2 hours until it is reduced. Now may give [illegible] the [illegible]
or give large doses of Quinia,
and as a general thing you will find it necessary to give some
Tonic Iron is the best, you
may give it in combination
with Quinine. The sedatives should
be removed until the wound
[illegible]
[illegible] should be
[illegible]
[illegible] should be
[illegible] be [illegible] the wound
[illegible] the [illegible] be very careful
for a year or two in regard to

[illegible] circumstances [illegible]
[illegible] efforts which strain [illegible]
[illegible]

Hybrid Trees
by
W. T. Davidson

Feb 14th 1887.

Typhoid fever.

Synonyms. Abdominal typhus is the name given it by German writers. In this country and England it is known by the name enteric typhoid fever. The above are the names by which it is generally designated, but it is also known by the names gastric fever, nervous fever, entero-mesenteric fever.

Definition. It implies typhus-like; it is an acute, self-limited, febrile affection, due to a special poison. It is contagious very feebly. Characterized by epistaxis, dull headache, diarrhoea, peculiar eruptions on the abdomen, by stupor and low delirium.

causes. They are but predisposing and exciting. Predisposing as to age, to it, for fifteen to 35 is the time in which a person is most likely to have it; after this time of life the liability to typhoid fever is diminished. Children under ten are not even likely to have it; as they grow older their liability increases more and more every year until 35. Another predisposing cause is the time of the year, to wit, a late summer and early fall when over hot and dry, being the time most suitable to the germs for affecting a person. It is thought that some persons receive the poison than are affected, or it is said that some are more susceptible to the poison than others.

The exciting cause is a special typhoid germ, which is not yet well understood. This poison usually originates from a germ in the decomposing stools of a typhoid patient; the germs must first be nourished in some decomposing animal matter. In certain climates the disorder may be generated, ~~anew~~ de novo, from ordinary filth and decomposition, other climates it ~~is~~ never originates, de novo, but originates from some germs that have been in the excreta of some other patient. The germ will not take effect if introduced immediately from a patient of typhoid; it must have some time after being excreted to develop. The germ must also have been in a suitable

habitat. We know that many days after taking the poison before one will have typhoid fever, is thought to be about three or four week, but it may not be as long as three weeks and it may be longer than four weeks. It is thought because that the people receive the poison by the air, and it may be that some receive the germs in that way, but the main infection receives it is in drink and food.

Pathological Anatomy. It, the blood vessels are dark color, it has lost its power to coagulate perfectly, the serum is unnaturally yellow. For the first three weeks after, enlarges, after this it begins to shrink. The spleen enlargement will [illegible] its normal size. When there is

[illegible] maximum, it will [illegible]
[illegible]
[illegible]
[illegible]
[illegible]

Mark, enlarged and
altered, the [illegible] at. For the
valves situated near the ventricular ostia
these changes almost [illegible]. The part
of the pneumatic triangle situated in the place of
the heart are very great. In many cases at
first sight and flatly [illegible] of
[illegible] a variety of forms in every case it
will break down with a moderate pressure
under the finger. There is not a lesion

in the body but what time ~~have~~ are parenchymatous degeneration ~~going~~ or granular changes going on in it in a latent fatent

Symptoms. The earliest recognizable symptoms – Typhoid fever as a rule is developed gradually, with disturbed sleep, disordered digestion, vertigo, headache, epistaxis, depression, malaise, and muscular weakness, followed by a chill or chilliness. The career of the disease will embrace the first, second, third and fourth and sometimes the fifth, sixth, and seventh week. The first week dates from the time the patient takes to the bed, with a temperature which gradually increases day after day, headache, nausea, diarrhoea, frequent pulse, coated tongue, about the

end of the first week rose spots, resembling the bite of a flea, appear upon the abdomen, chest and some times upon other parts of the body. Second week, the symptoms of the first are exaggerated, with the appearance of constant delirium, tender abdomen, a gurgling sound in the right iliac fossa is heard, sordes on the lips and teeth, if you auscultate you will hear bronchial rales, the diarrhea continuing about the same as in the first week. Third week the fever has more the remittent form than before, in the first two thirds of this week the evening temperature remains the same although the morning is not quite as high as before, the latter third of the week the fever is not quite as high as

the preceding week. Fourth week, pt. Temperature is almost normal in the morning, is not quite as high in the evening as it was the week before. The tongue and mucous membrane have the discharged, has excited cases. Convalescence of it has been extended between weeks.

Typhoid is a typhoid fever. The thermometer shows a gradual rise of temperature from day to day, ~~which~~ during the first week, which is a diagnostic of typhoid fever. At the end of this period the temperature rises at least to 103°. The temperature in the morning of the first day stands generally at about 98.5°, in the evening at 101.5°; second morning 99.5°, evening 101.5°; third morning at 101.5°, evening at 102.5°; it continues to rise in this way

until about the end of the fifth or sixth day, when it will range between [illegible] and 104° in the evening, the morning temperature being about a degree lower than the evening. The diarrhoea exists to a large extent of area, and is one of the diagnostic symptoms of typhoid fever. The stools are not foul dark, but early in the morning [illegible] are olive-yellow. Constipation may exist, but this is exceptional. The most important symptom of the disease is a rose pink colored eruption. They appear from the seventh to the ninth day, on the abdomen, chest, and back and sometimes on the limbs. They are slightly elevated and oval in form. They disappear at death and also on slight pressure. The number of

fever are small, the eruption scanty, lasting about five days. They often with a relapse. Herpes usually appears on the back, abdomen, & thighs. Rash, papular, irregular form. Nervous symptoms are pain in head during the first week, delirium of a low and muttering type is manifest in majority of cases, during the second week. It is generally pleasant in character. The mental condition in the second, third and fourth week irrespective of delirium is characterized by drowsiness ~~and~~ and stupor with great prostration: a patient may be so dull that he makes things out until a rest for them. Sight ~~and~~ impaired, deafness is sometimes ~~impaired~~ pronounced.

Complications. A very sudden fall in the temperature to normal or even below normal, with the passage of blood before the decline in temperature is a very good symptom that it is not a hemorrhage has occurred from rupture of a vessel during the inoculation. Peritonitis and [illegible] may occur, [illegible] [illegible] & [illegible] peritonitis may occur without infiltration. R[illegible] later for [illegible], hypostatic congestion and albuminuria may occur, ~~wh~~ and which it receives all care prior to the grant of the case.

Relapse. Relapse may occur. The symptoms of a relapse are not alone the same as the original attack, primary fever

[illegible]

Diagnosis. Typhus, typho-malaria and remitent fevers are those with which typhoid fever are most likely to be confounded. The following are some very good points by which it may be distinguished from the above; the gradual development of the fever from day to day, the absence of very marked remissions, abdominal symptoms, namely, diarrhoea with chalk-colored defections, tympanites, tenderness in the iliac regions and gurgling. The recurrence of epistaxis and the characteristic eruption. The rose-colored papules are found in other affections sometimes, therefore may mis-

lead ones. The sort of the patient and the fall of the year may assist you in making your diagnosis. If we have the points named alone in a case, and points belonging to other diseases absent and after a certain duration of the disease, we may very safely consider it as a case of typhoid fever. Acute meningitis is distinguished from typhoid by very early and active delirium by intolerance to light and sound. If we do not give physical signs due attention, we may confound pneumonia and typhoid fever. With the slightest attention to physical signs we will never be mistaken. Acute miliary tuberculosis has on some occasions been mistaken for

Typhoid fever: the prominence of cough, the frequency of respiration, the abundance of subsequent albumen and the absence of signs that accompany typhoid fever, it may be distinguished from typhoid fever. Typhoid fever has some times been mistaken, ~~ex~~ in children, for enteritis, on account of the abdominal symptoms. This error can always be avoided if we will give some care to the development and progress of the disease.

<u>Prognosis.</u> It is unable to give a positive prognosis. A typhoid patient is in danger until there is abdominal symptoms which indicate that intestinal changes are still

progressing. If at the beginning of the second week the temperature is not higher than 104°F. or 105°F. and has declined regularly, the prognosis is good. If the temperature continues above 105°F. during the second week, and unfavorable prognosis is indicated. In cases in which there is during the second week a marked morning remission, which begins early and continues until midday, and does not rise until late in the evening, and at the end of this week there is a marked and persistent fall in the temperature, a favorable prognosis may be given. A rapid and marked fall ~~at any period~~ temperature at any period in typhoid fever is to be considered grave. If

often precedes severe intestinal hemorrhage. A sudden rise in temperature is another bad omen. The influence of age is very great in determining the prognosis; the death rate is greater above than below 45 years of age, the prognosis appears to grow graver as the patient is advanced in age. Those who constantly use alcoholic stimulants are not so apt to recover as those who do not use them. It is said by some that vigorous persons are more likely to succumb than those of feeble constitution. Many cases have been fatal on account of complications, such as peritonitis, pneumonitis, chronic disease of the kidneys and hemorrhage. These and complaints make a case grave. One cannot be too guarded in his prognosis.

Treatment. We have no specific remedy for typhoid fever as a specific disease. Disinfect the urine and the stools with sulphate of iron or chloride of zinc. Never at any time allow the discharges of a typhoid patient to be emptied into a privy or water closet; have a place prepared for them in which it will be impossible for the discharges to affect others; all clothing that may have been soiled by the discharges of a typhoid patient should be burned for fear of infecting others; the clothing that need not burn should be boiled in chlorine water. Great care should be taken that responsible persons have no connection with wells and springs. If we will destroy the germs we will have fewer cases.

It is thought by some that by giving calomel in large doses during the first week, we may make the attack lighter. ~~Iodine is thought to have the same effect.~~ Mercury will lower the temperature, and apparently lessens the duration of the case. Mercury and Iodine are thought to be a specific remedy by some in Germany.

If iodine be given, it should be during the first three weeks. Lugol's solution of Iodine is the best; give it minima in water three times a day.

As regards the most important things to be accomplished is the reduction of temperature or rather the keeping of the temperature below a certain standard, ~~sulphate~~

of quinine, digitalis and hydrotherapy are very useful. Quinine should be given in thirty and forty grains doses every four hours, if given with the view to reduce temperature in typhoid fever. From four to six hours after administration of forty grains of quinine the temperature will fall. After reducing the temperature with quinine, the administration of quinine should be ~~st~~ discontinued until the temperature begins to rise again. The antipyretic power of quinine is better aided by the administration of digitalis in tablespoonful doses of the infusion every four hours for the period of twenty-four hours: digitalis should be

employed only when quinine is given and should not be employed when the heart is weak or the stomach irritable. Digitalis must not be given.

Hydrotherapy consists in placing a patient with typhoid in a bath, having a temperature of 90° F., which should be gradually lowered by the addition of cold water, ice, until it comes down to 80° F. When the rectal temperature in the axilla is 100° F. the bath is indicated. The bath should not be continued longer than fifteen minutes. The bath should be repeated every three hours if the temperature goes over 103° F. When the bath is used at a lower temperature, we should constantly

use the thermometer. If in any bath is used the patient becomes faint from its use, stimulants must be given. In some cases where we can not use the ~~wa~~ bath we can use the wet pack with great ~~advantage~~ effect. The feet should always be protected when we use the wet pack. The wet pack consists in wrapping the patient in a sheet wrung out of cold water, and then covering the patient with a roller blanket. ~~It is~~ The wet pack should be repeated until the desired fall of temperature shall be obtained. Use the thermometer at all times to observe the effect. If the patient becomes depressed stimulants are indicated and should be used. Cold bath and wet pack are

contraindicated where there is high internal heat with cold surface, weakness of the heart's action or hemorrhage.

When complications arise they must be attended to. When there is heart failure stimulants are indicated and must be given; they should be given when the patient has been addicted to their use also, ~~but~~ Where the patient is restless and restless they are treated successfully with morphine.

Diarrhoea where it exceeds more than three stools a day should be checked. When there are more than three a day, opium is indicated; Carbolic acid and bismuth and it are good.

For thirst cold drinks in moderate quan-

ounces, and are dissolved in in the mouth.
Headache is relieved by cold to the head, fat laxes, and morphine hypodermatically.
For hypnotics, cold compresses or turpentine stupes to the abdomen.
Where hemorrhage has occurred ergot must be given hypodermatically and ice applied to the abdomen to make the flow of blood; also morphine to stop the movements of the intestines.
When we have perforation and peritonitis morphine hypodermatically is the remedy with absolute rest. The bladder should be attended to at each visit.
For delirium morphine. Bedsores should be prevented if possible, by the removal

of pressure, the skin should be hardened by washing it with alcohol. Often the bedsores have come through so dressed with equal parts of castor oil and copaiba.

The principal lesions being in the ~~alimen~~ intestines make the alimentary treatment very important. A patient with typhoid should have nothing but a liquid diet, and the best is, of course, milk. The patient should have about 2 pints every 24 hours, including water, which should be taken with this diet. It may be alternated with chicken broth.

Dr. Pellizzari's treatment, fresh air, quiet, digitalis, the urine and the stools, liquid diet at intervals of every two or

[illegible] hours, in [illegible] great things
[illegible] hybrid [illegible].

Thesis.

On

Irritation and Inflammation.

By

John Davis.

Baltimore Maryland.

268.

Irritation and Inflammation.

Gentlemen.

Irritation signifies to excite or stimulate, it is the morbid increase of action. a part short of inflammation, irritation and morbid sensibility are convertible terms. observed manifesting itself chiefly in the nervous system, without structural change as we discover in inflammation, irritability accompanied by malaise. and if prolonged ends in inflammation, neuralgia is an example of local irritability sometimes caused by distal irritants. as for example a carious tooth will

cause neuralgia of the face irritability does not always pass away with the removal of the cause for instance a splinter of wood, or any other foreign substance thrust through the palm of the hand may cause lock jaw, the removal of the foreign body will not always cure the attack of tetanus. Irritants always stimulate the secretions. irritation is unaccompanied by excitement of vital function. the first step in the treatment of irritation is to remove the cause, sometimes the pain is so severe as

to call for mitigation, before the cause can be removed, we may have irritation without inflammation. The reverse however is not true, inflammation results in altered nutrition, and terminates in resolution, suppuration or gangrene. Disturbance of function is one of the chief symptoms of inflammation. Inflammation may be defined to be a morbid increase of action in a part with altered nutrition; it is the opinion of some pathologists that the first evidence of inflammation takes place

in the nerves. In every inflammatory affection there is an increase of fibrin, the result of waste, the secretions are tepid. In prolonged inflammation suppuration with hectic fever will supervene, every organic change begins with inflammation, or is overtaken by it during its course, The process of inflammation, which may occur within the various organs of the body, which if unaided by nature or art will terminate with disastrous consequences. The term inflammation is derived from flamma

in the latin or phlegmon in the greek, which signifies to burn up. Inflammation may be of a traumatic or idiopathic origin, the first stage of an inflammation is congestion or stasis. an authority has defined an inflammation to be a succession of changes which occur in a living tissue when it is injured, providing the injury is not of such a character, as to destroy its structure and vitality. The classic symptomes of inflammation as given us by Celsus, are redness, swelling heat and

pain, to which modern writers have added impairment of function. The production of heat in an inflammation still occupies a place in the region of speculation, though I believe it to be due to the metamorphosis of tissue. Redness and heat are the most typical of these four symptoms, and heat is the more characteristic increase of heat being without doubt the most important clinical local symptom of inflammation. The redness is due to the abnormal supply of arterial blood which

is forced into the capillaries, which are superficial, accompanied by the haemaglobulin, the coloring matter of the red corpuscles, the redness may be localized or diffused, of a bright red color or of a livid hue. The former tint indicating a healthy or sthenic, the latter (evidencing want of power) an asthenic inflammation. It is clearly due to the capillary injection of the part, for in the sthenic form the circulation through the capillaries is more active than it is in the asthenic, in which the dusky congested livid color suggests blood stasis

The swelling ensues, as a result of the exudation of the liquor sanguinis, and the escaping of the white blood corpuscles or leucocytes or protoplasmic atoms into the surrounding tissue and there multiplying. The hardness is to be explained by the nature of the tissue involved and the degree of blood stasis, which is attained in the tissues. Absolute death of the involved tissue takes place when the circulation through the capillaries is entirely stopped the exudation from the slowly flowing blood stream of corpuscular liquid being in

the words of Sanderson, the central phenomenon of inflammation.

Pain is due to the pressure on the sensitive nerves of the part. Pain is a symptom which varies much as to its character as well as to its intensity and depends a great deal upon the amount of tension in the inflamed part. The pain of inflammation is always worse at night and is more agonizing in inflammation of bone than in the inflammation of soft parts. The former being of an acute gnawing character giving the sensation of being

served in a vise. The pain of surface inflammation is of an acute burning character as in erysipelas. In rheumatism in which the fibrous structures of the joints are inflamed the pain is also marked. When the process of repair commences in an organ, inflammation ceases. The greater the tissue change the more intense will be the heat. The presence of fibrin in drawn blood, denotes waste and is not an evidence of inflammation. It was formerly taught that the blood of poorly fed persons always presented a larger

percentage of fibrin than the blood of the well nourished, and the poorly nourished are always more susceptible to inflammatory changes. In inflammation dilatation of vessels is the first step following after primary contraction of vessels due to irritation. This dilatation continues till the vessels become larger than they normally were. The blood current is hastened when the vessel contracts, and is retarded when the vessel dilates. At this time the watery elements of the blood decrease, and a damming up

takes place by an accumulation of blood corpuscles. This blocking up in the blood vessels continues till a complete stoppage in the circulation occurs at the point of irritation. When we arrive at this step of the process we have death taking place at the point of irritation. At the point of irritation we have an accumulation of leucocytes that have migrated from the vessels wall. The watery elements of the blood exude at the same time. The process of repair or clearing up begins at the periphery of the inflamma-

tory process. The web of the frog's foot, its tongue, its mesentery or cornea is used to illustrate the process of inflammation. With the aid of the microscope you will first observe an increase in the blood current in the capillary circulation. after a certain time the current will become slower, when you will observe the leucocytes which have an amoeboid movement clinging to the walls of the blood vessels with tenacity, the leucocytes bud and have a variety of forms. how they get through the walls of

the vessel is still a matter of speculation. The leucocytes migrate into the surrounding tissue and multiply, ultimately becoming converted into pus which requires an early evacuation. Resolution is a favourable termination of an attack of inflammation, death the unfavourable end. The early treatment of inflammation should be of an anti-phlogistic character as general and local blood letting sedatives and local diet, will diminish and remove exudation or render the products of exudation as harmless as pos-

sible. It is possible to prevent an attack of inflammation by cold applications, soothing topical applications are also useful to sooth the part. When exudation has coagulated it either becomes organized, or undergoes resolution. in this condition warmth and moisture are indicated. mercurials are useful in preventing inflammation purgatives diuretics and diaphoretic favour absorption of exudation. counter irritation is also useful to the same end in fever the blood is primarily affected. but in local in-

flammation it is the blood that is secondarily affected affected from the primary centre. Patients suffering with inflammation should be well fed so as to prevent the inflammation from consuming the normal tissues. direct only food that is easy of digestion as milk and meat essences. Cancerous forms of inflammation are the hard scirrhus. soft encephaloid, colloid and epitheliona. Cancer carcinoma is a malignant disease, characterized by a growth that tends to spread into the surrounding tissues and in the course of the lymphatics of

ite part affected, and is repro
duced secondarily in distants
parts of the body. Epithelioma
or cancroid frequently occur in
parts of the body supplied with
epithelium. The question of the
genesis of carcinoma involves
that of the genesis of epithelium
generally. It is maintained by
most histologists that epithelium
can only originate from epi-
thelium, and that the epiblast
and hypoblast are the sources
from which all epithelium is
subsequently derived. Others
admit that epithelium may orig-
inate also from connective tissue.

epithelioma may be extirpated without recurrence. The treatment of cancerous inflammations in general is excision and caustics in the form of paste, give sustaining remedies, and anodynes to relieve pain, and have parts thoroughly disinfected. Inflammations frequently terminate in suppuration. pus the product of this form of inflammation is composed of serum and pus corpuscles, which are only leucocytes as ordinarily found, that have died and undergone fatty degeneration but if taken quite fresh we will find them

alive and having all the proper-ties of a leucocyte when normally found. but normal fresh pus is only blood minus the red blood corpuscles. The treatment for suppurative forms of inflammation should be warmth either moist or dry, which ever is the more agreeable to the sensations of the patient. when fluctuation is pronounced the pus should be evacuated. either with a bistoury or an aspirator. before plunging a bistoury into a mass of pus it is well to think of the anatomical relations of the abscess. in

the treatment of an inflamed part always first seek for the cause and remove it, and then put the part at rest. the swollen condition of the inflamed part if in the very incipiency can be controlled by pressure, which prevents the dilatation of the vessels. before mapping out a line of treatment in inflammation ascertain the stage of the process and treat that condition gradual compression and cold will prevent swelling if in the stage of afflux. elevate the part if possible and secure it absolute rest. relieve the pain with

an opiate, promote the secretion by ordering a laxative, except in abdominal inflammation.
Suppuration is recognized by severe throbbing pain and probably a chill, fever and sweat the depending position always more painful than an elevated one, collections of pus always make their way in the direction of least pressure. Contagious types of inflammation are only so through specific causes, when death occurs in a few days as a result of an inflammation remove it. When an inflammation is acute or rapid, all the

symptoms manifest themselves with great rapidity, and the results of the action are quickly shown; when it is slow or chronic they are less clearly marked. Associated with these local symptoms of inflammation there will always be some constitutional disturbance, which is known as inflammatory fever. This fever may manifest itself in all degrees of severity, its intensity depending much upon the character of the inflammation and its seat. when a local affection is acute or of a sthenic nature, the constitutional

disturbance will be severe; when chronic it will probably be mild, and when asthenic it will be marked by great depression. It may show itself therefore, only as a slight febrile state, or it may be marked by the severest symptoms. Taking for instance a case of severe compound fracture, without much haemorrhage in a person otherwise strong and healthy as a type of the affection, we find that before twenty-four hours have passed from the time of injury his general system begins to be thus affected; he feel hot or alternately hot

and chilly. his skin and lips and mouth are dry. he passes his urine in less quantity but of a higher color than usual. his pulse is quickened. a sense of general discomfort gains upon him. he becomes restless and intolerant of disturbance. his skin feels hot to surgeon's hand he erases more and more water, his sleep is troubled and and unrefreshing, or as night comes on he gets delirious. If his bowels act which commonly they are inapt to do without laxatives. the excretions are morbidly offensive. Gradually these

symptoms give way, in proportion as the injured limb ceases to be tense and passes into suppuration. The skin and mouth become moist again, the excretions lose their concentrated character, the hard pulse softens and the heart's action becomes quiet; the nervous system is no longer restless, the look of trouble passes from the countenance, and the patient can again take solid food.

With these few remarks on the subject of inflammation I proceed [illegible] tion of the cavity of the

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Intermittent Fever

By

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Martinsville

Virginia

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19

Intermittent Fever

or

Chills and Fever

consists of a series of febrile paroxysms separated from each other by distinct periods of apyrexia, The intermission or apyrexia the time when there is no fever, is the interval between the end of one paroxysm and the commencement of the next - and the interval is the time occupied by one paroxysm and the following intermission - The duration of the interval is the basis of a division into varieties commonly known as the different types of the disease - There are 3 ordinary types of this disease, namely the quotidian in which

the paroxysm recurs every day - The tertian in which it recurs every third day, reckoning the days on which two successive paroxysms take place - and the quartan in which it recurs every fourth day - But each type may be double; in which case the quotidian would have two paroxysms on each day instead of one - some authors say that the tertian is the most frequent type others, say that the quotidian is - The paroxysm when regular and fully formed consists of three stages namely the cold, hot, and sweating, and follow each other in the order named - It is generally preceded by languor, headache, want of appetite but not always for sometimes it commences

abruptly without any warning whatever - when the cold stage is fully formed the patient feels so cold that he cannot hold himself still, but shakes all over, even shaking the bed on which he lies - notwithstanding the sensation of cold which the patient experiences and the feeling of coldness when the hands are placed on certain parts, the thermometer in the rectum shows an increase of the temperature of the body, the thermometer however when applied to the extremities shows a decrease of temperature below that of health - The face is frequently pale or generally livid, has a shrunken appearance, the hair stands up as in

fear, has no appetite but sometimes nausea and vomiting - Independent of the shivers alluded to there are other symptoms of a nervous character, such as headache, also pain in the back & Loins - This stage on an average lasts from one half to three quarters or even one whole hour - Then comes the hot stage. This stage does not take place abruptly, but gradually, for the chilly sensations alternate with flushes of heat until the hot stage has gradually taken its place, warmth commences on the face and insidiously works its way over the whole surface - at first when the patient has just gotten warm all over, if he would move a limb to a

cool part of the bed he would feel a distinct chill run through his frame. The warmth passes quickly into a burning heat. The axillary temperature runs high usually reaching 105 or 106 degrees Fahrenheit, with this high temperature there is a dry mouth and sick stomach the nausea generally amounting to vomiting. There is a severe pain in the head and back, delirium sometimes adding to the symptoms and in children ~~there~~ are convulsions, as that phenomenon bears the same relation to children that delirium does to the adult. The hot stage generally lasts 2 or more hours before it begins to abate, then the sweating stage comes on. as the hot stage comes ~~to~~ a close the perspira-

tion is seen to come on the face and gradually spread itself over the surface of the body - It is sometimes scanty, but generally copious and is occasionally profuse - The patient feels better just as soon as he begins to perspire, The skin which before was dry and hot now becomes cool and moist, the mouth becomes moist the headache which was so severe now has gone, and he falls into a sleep from which he awakes without fever and comparatively well - The whole paroxysm usually lasts from 3 to 4 hours - In Intermittent fever the symptoms are not always as regular as discribed above, for sometimes the cold stage is represented by only ~~a~~ a feeling of chilliness about the nose, hands, or feet and even this is occasionally absent, in

which case it is vulgarly called Dumb-ague to distinguish it from shaking ague - The sweating stage may also be nearly or wholly absent, then its place is taken by a copious discharge of urine or by a diarrhoea - Indeed any of the stages may be absent, leaving the paroxysm to be represented by only one or more stage - sometimes the paroxysm will occur in one limb all of the other part of the system remaining apparently uneffected - There are such affections as neuralgia, rheumatism Epilepsy, hysteria, diarrhoea and dysentary which occur at regular intervals & have no other relation to this fever than their periodicity, such cases are called masked cases of intermittent fever - During the apyrexia some people are entirely well

while others are not, although they have no fever they are languid, are easily tired have not much appetite & have a sallow appearance - The paroxysm does not always recur at the same hour regularly but may come on an hour or so earlier or later than the regular time & thus a quartan may be converted into a tertian or a tertian may be changed into a quartan, in the former case it would be called a retarding quartan and in the latter case it would be called an anticipating tertian - a peculiarity about this fever is that its paroxysms rarely ever come on at night, it seems as if darkness or sleep in some way keeps it off - For when an anticipating tertian is approaching evening it may jump over the

night and hold forth on the following morning. They recur most frequently between the hours of 8 A.M. and 8 P.M. Intermittent fever like most other diseases has certain grades, for some cases will be of a sthenic character with a full and vigorous pulse & quick reaction, and again it may be of an asthenic character with an incomplete reaction and feeble pulse. The former grade is called, though improperly, inflammatory Intermittent fever for there may be no inflammation at the time. The latter grade is called "Feeble" in which case the energies are somewhat but not much depressed or it may be of a typhoid or pernicious tendency when it should be promptly attended to and that quickly - when this fever has been speedily cured

the only unpleasantness that is left is a disposition to return. If allowed to run on it may produce some bad symptoms as an enlarged and indurated spleen - The liver may be also thus affected - when the spleen becomes enlarged and indurated causing it to occupy a large part of the abdomen it is called "ague cake" - Dropsy may also be a frequent result of it - The cause of Intermittent fever is a special morbific agent commonly known as malaria - The only diseases with which this fever is likely to be confounded with is hectic and bilious or remittent fevers - From hectic fever we distinguish it by the fact that in it there is not generally that regularity of the paroxysms in

occuring - and by taking into consideration the history of the case, by the hectic flush and night sweats, for the hectic fever generally occurs in the afternoon the other most frequent in the forenoon - From remittent or billious fever by observing that the time between the attack is not free from fever, but there is only ~~an~~ slight abatement of it - The prognosis is very nearly always favorable unless it has the malignant form - next comes the treatment - This should be divided into that used during the paroxysm, & that during the intermission - Dr Flint taught that it was not necessary to commence with preparatory treatment, as was once thought necessary, For aside from the

delay ~~from~~ in arresting the disease, the medicines or remedies used for the purpose were injurious - This preparatory treatment consisted in giving mercurial cathartics, emetics and bleeding - The medicines used most universally in the cure of this fever are the preparations of cinchona and arsenic - The antiperiodic remedy proves most efficacious when given as near as possible to the paroxysm which has passed, and it is probable that if it be given in the sweating stage the chances of preventing the next paroxysm are still greater than if its administration be delayed until after this stage - The quinine should be given in sufficiently large and frequently repeated doses

as to produce evidences of cinchonism as soon as possible - To effect this object an adult should take 5 grains at a dose and repeat it every 3 or 4 hrs once. Twice or thrice if necessary for the effect just stated - If another paroxysm occurs the same method of treatment is to be repeated - when the sulphate of quinine is used it should be given in solution, and as it is not very soluble in water its solvency should be secured by the addition of a minim or so of aromatic sulphuric acid to the grain of quinine - The bisulphate of quinine is to be preferred to the sulphate when it is to be given in powders, pills, or capsules, on account of its greater solubility - when the stomach is irritable or from any

cause it will not retain the drug, it may be very well given by the rectum in which case the dose should be increased. The unpleasant cerebral effects of quinia are lessened or prevented by the simultaneous administration of some diluted hydrobromic acid - when the most prompt action of the drug is wanted it may be given by hypodermic injection, as that method is much quicker in its action, requires less of the drug and the effects are 3 or 4 times greater than when given by the stomach - The hydrochlorate of quinia is preferable in this method - other preparations of cinchona are sometimes used, as the sulphate of quinidia as its antiperiodic powers are not less than

that of the sulphate of quinine - sulphate of cinchonia and cinchondia are also used but are not as good as the above mentioned ones - after the preparations of cinchonia, arsenic stands first in the cure of this disease - not only is this very efficacious, cheap, and tasteless, which of course would render it suitable for the poor, for children, and those who from some peculiarity cannot take quinine; but it must be also borne in mind that it has the very serious disadvantage of being an active poison and a remedy not to be trusted in the hands of the ignorant, when it is used it should be given in the form of Fowlers

Solution, an in dose of 5 to 10 drops 3 times a day to an adult - The muriate of Pilocarpine has been well recomended when given hypodermically at or just before the paroxysm in $\frac{1}{5}$ grain dose - Nitric acid, Common salt, Opium or some of its preparations, salicin, peperine are also some of the remedies used in this disease - During the cold stage the patient should be put in bed well covered, should take warm drinks while at the same time hot bricks or bottles filled with hot water put around him - when there is much pain or nervous disorder give a grain of opium or an equivalent amount of some of its preparations. some recommend opium in full

dose, say 60 drops of the Tinct, just before the cold stage and say it will generally abort it. strong impressions of almost any kind kind made upon the system during the apyrexia may prevent the coming paroxysm. Dr Hartshorne relates a case in which the patient was cured by being solemnly assured, without medicine, by a quack that "he would never have another chill". During the hot stage cool drinks must be taken as the effervescing draught every one or two hours during the attack or rather this stage – In the sweating stage all that has to be done is to prevent the patient from becoming chilled, so as to stop the perspiration During the intermission the treatment

is of a prophylactic character.
Here of course one essential point is the removal of the patient from the influence of the exciting cause, taking him away from the malarious locality - when this cannot be done impress upon him the importance of not getting over fatigued, to avoid all kinds of exhausting influences. He should also bear in mind that the poison is more virulent at night than during the day & he should refrain from going out at night or in early morning, when obliged to be out at an early hour in the morning it ought not be on an empty stomach but after taking a hot breakfast, or at the least after something has been

taken, after the paroxysm has been interrupted, the remedy should be continued in small doses, between 4 and 8 grains daily, for a considerable period – If the disease has left the patient anaemic he should take from 5 to 10 drops of the muriated tincture of iron 3 times a day and have a light nutritious diet

Respectfully

W. R. Drewry.

Christmas of 1886

1

[illegible]

Undergraduates of the University of Maryland, School of Medicine.

Although many and various have been and still are the number and styles of essays and of [illegible] relating to the subject of Pneumonia, it has not for the reason [illegible] in its favor, we would the fact that [illegible] has been chosen by many of our fellow students. [illegible]

30p.

I shall, however of necessity follow
theory and history as learned from
other observers, as original observa
tions of [illegible]
[illegible]
[illegible]
I have an [illegible]
[illegible]
[illegible]
be none from what my ears have
heard [illegible] I do
not [illegible] do.
According to what I have heard
and read, but I have been
[illegible] of [illegible]
upon by gentlemen of science
[illegible]

[illegible] which they conduct them [illegible]

I shall take for granted and in [illegible]

[illegible]

Pneumonia

or pneumonitis signifies [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]
lines the air cells and bronchioles
and that lining the larger bron-
chial tubes, as well as another
difference in the functions of the
[illegible]

[illegible]

[illegible] Solar [illegible]

[illegible] We cannot [illegible]

[illegible]

[illegible]

[illegible]

for if not developed as a cover-

[illegible]

[illegible]

the amount of tissue involved [illegible]

[illegible]

and [illegible]

ly mild. As an explanation

[illegible] in the latter case none of the

[illegible]

lected area is a source of great

suffering, — not only from its in-

[illegible]

in the organ; causing [illegible]

[illegible]

be described in connection with

[illegible]

[illegible]

[illegible]

passed into one ear

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

the air cells still contain air; but the condition of [illegible] not established, no [illegible]

[illegible] so affected may increase [illegible]

[illegible]

[illegible]

[illegible] ever lobe is primarily affected. This is not [illegible] established rule, for in some cases [illegible] [illegible] apt to be in the aged.

The first stage [illegible] last more than a [illegible] [illegible] by the second stage [illegible] as rapidly passes into the third or [illegible] passes [illegible] or resolution [illegible]

it is still not impossible in all cases for recovery to take place, but favorable prognosis is not of the question if suppuration takes place to any more than a very moderate degree. Typical in which solidification takes place usually occupies between twenty four and forty eight hours. But this stage may be passed and resolution established in less than twenty four hours. The average duration of the second stage is about three days. The third stage which is that of absorption provided, the disease from natural is un-favorable. The solidifying deposit may be removed as early as the third day but generally it is not effected until about four days have elapsed; and in some

it is still not [illegible] to allow for recovery, but [illegible] generally prognosis is not if the [illegible] of suppuration takes place [illegible] a very [illegible] death. Beyond [illegible] which solidification takes place generally occurs between twenty-four and forty-eight hours. But this stage may be recovered and resolution established in less than twenty-four hours. The average duration of the second stage is about three days. The third stage which is [illegible] provided the disease [illegible] is not [illegible] the solidified deposit may be removed as early as the third day but generally it is not [illegible] until about four days have elapsed and in some

cases a month or more is required for the air cells to regain their functional capacity. There is no regular period of incubation in pneumonia. There are few if any premonitions. The attack is nearly always ushered in with a distinct and in many cases prolonged chill, which is most apt to occur during the night. During the chill, or even after it has ceased, the patient is seized with pain, in some cases very severe, in the affected side. The pain resembles that of acute pleurisy and is therefore thought to be due to the pleurisy developed in connection with the pneumonia. This may be true to a certain extent, but there seems to be no reason why such inflammation in an organ from

[illegible] life [illegible] to [illegible] could
[illegible] be a [illegible] great [illegible] [illegible] [illegible]
is said that in some mild cases of pneu-
monia pain [illegible] tirely absent. The pain
of pneumonia is usually referred to a lim-
ited area or point over the up-
per [illegible] of the [illegible] [illegible] In this limita-
tion of pain we find an important clue
to a discrimination between this affec-
tion and pleurisy, in which the pain
is apt to extend over as much as the low-
er third of the chest on the side affect-
ed. Cough is sometimes wanting but
usually it exists from the very [illegible] of
the attack, to greater or less extent, and
it greatly increases the pain as one would
naturally suppose. There may be expec-
toration - at first quite scanty, to subsequent

and tubercles, which have a more red-
brown and in the disease they assume a
rusty red color but it is the iron not
used for this name. The sputa is called
rusty expectoration. If there is usually
a small quantity of blood extravasated
with the matter not effusing the
the bronchial tubes. Sometimes the blood
is mixed the sputa is small compact
and adhesive. In other cases it is
thin very watery. In some there
is an abundance of blood mixed with
this viscid matter in which case the
peculiar dark color gives rise to the appel
lation of pneumonic expectoration. Again
in some cases there is no expectoration what-
ever. Fever sets in at the onset of the disease
The pulse & pots are increased. Nausea

not as frequent as in fever or the exanthematous diseases. The rapidity of respiration is due to the greater call upon the sound portions of the lungs to perform their function. The pulse ranges from 80 to 120 per minute and is of a full, bounding nature. Temperature may rise as high as 105 with a slight morning remission of one or two degrees. If there be a sudden rise of temperature or extend the morning remission, or the patient become disorder then than the lungs have been healthy set up. But this condition is rarely accompanied by a chill.

During the second stage the symptoms change more or less. There is not so much pain and it is said sometimes entirely is gone. The cough which got so much

pain is now not so overwhelming as in the first stage, and expectoration more free. The cough of pneumonia is not so marked, the sputum is opaque, and the sputum in consolidation is more abundant, less viscid and tenacious, frequently coming from the bronchial tubes of the affected side. It is the product of the mucous membrane of these tubes and the product of the inflammation, but the greater with the mucous, counter-expectoration. The number of respirations still increased, and rapidly established. If, however, inflammation be subsided, a number of respirations still the same, cough and pain is still slight.

Breathing may be labored, also more

[illegible], and dyspnoea exist. We have seen that in [illegible] gravity does not necessarily exist because of the large portion of lung involved. The patient may [illegible] to some extent, and yet not so much as to greatly interfere with the respiratory acts, and the febrile movement may be [illegible] slight. It is sometimes the case that a patient may have pneumonia and the opposite lung suffer in little distinct manner. When the third stage or that of resolution is reached there are [illegible] signs of improvement: cough abates, normal respiration is restored and fever quickly subsides. If the third stage instead of being one of resolution be one of suppuration, an entirely differ=

and state of [illegible] and [illegible]
[illegible] denote gravity of the disease:
there is debilitation of the [illegible] and
frequent expectoration: respirations
are labored and frequent. The ex-
tremities are completely blue as
with the mortal malady. The fun-
ctions of life languish, [illegible] and
the patient dies of asphyxia. It is
said that during the course of the dis-
ease the children disappear from the
urine, requiring a delicate test to detect
their presence. Besides these symp-
toms of fever, there are some
marks to be added. In case, in
with the severity of the disease there will
be more or less delirium: the patient
may attempt to get out of bed, requiring

the constant attendance of the nurse for
reasons depending upon the constant
condition. Cases in both sexes may
present a circumscribed but extensive
tumefaction which is hard to feel.
At this [illegible] of the menses is
prolonged and often generally com-
ing on in the night but the initial
chill is often absent in children. They
may have convulsions. Also in advanced
old age the chill may be absent.
Other characteristics are the spontaneous
pain color and intensity. When the change
of color takes place we think resolution
is taking place. There is no [illegible]
herpetic eruption upon the lips. Gan-
grenous occur the prognosis is
will be fatal. If the [illegible]

it is determined by physical signs, gangrene, if it exists, is determined by the fetor it imparts to the breath and expectorated matter. The circulation in pneumonia comes from the blood circulating in the pulmonary vessels.

Lobar pneumonia may occur at any period of life. It may take place under five years of age, but cases are more apt to occur between ages of five and twenty years. It is not so apt to take hold on an individual over sixty years of age. It attacks females less often than it does males. This disease occurs as a complication of other diseases as typhus and typhoid fever and in cholera. And the disease generally is developed

sp[illegible] [illegible]. When the disease there is no way of [illegible] the duration of the affection. The [illegible] usually is [illegible] [illegible] [illegible] but there is [illegible] [illegible] position to the disease. [illegible] injury may [illegible] [illegible] portion or all of a tele according to the extent of the injury.

Diagnosis

(1) If certain signs be present the diagnosis is quite clear. For example the sign use of the patient has chill, which is generally more or less severe and has got followed by fever, bringing [illegible] with an a discomfited [illegible] the chest, and the sub-expectoration. In such a case it has no difficulty;

in an along the diagram. Not all
these signs are to be met with
with physical signs, which however
should be done in order to ascertain
the extent of the effusion. In the first
stage, there will be a dull dullness
in percussion and if the ear or the
stethoscope be applied over the chest
the crepitant rale will be heard in
most cases. This is a variety of the
sound we call dry, high pitched crack
ling sound. It is heard on inspiration.
There is another sound called the
subcrepitant rale which has a sound
similar to that caused by a current of
air forced through water, a bubbling
and moist sound. It is said that
both these sounds may exist at the

some time together. If these important signs be not present, at first, we may not be able to make a diagnosis till after a little delay, as the mucous mem. of respiration requires a sufficient degree to make it distinctly of the disease. When the second stage is developed the difficulty of diagnosis is increased, and from that origin the may be lost. From typhoid fever the disease is to be distinguished, which is quite easily done when we recall some of the prominent symptoms in the lungs, viz. of the latter disease, pain, tenderness in the iliac regions gurgling, fever, &c. and the characteristic eruption &c.

If the disease fix in the state of suppuration there will be distinct dullness

and flatness on percussion and moist bronchial rales.

Prognosis. this depends upon the amount of lung involved and upon complications and previous condition of the patient. Those who are not enfeebled by age or by disease, bear the attack better least. If patient have organic disease of the heart, there is more danger for that reason. The inability, on the part of the lungs to perform their function is liable to cause great strain upon the right cavities of the heart, and congestion may consequently take place in the organ. The pulse in case of this accident is frequent, feeble and irregular. The respiration is labored and all symp-

tion, always a change for the worse.
Frequency and fretfulness of the pulse are considered unfavorable signs.
In cases ending fatally death usually takes place by asthenia. If temperature rises up to 105 the disease will very probably end fatally. There will always be lowering delirium and muttering observed at the visits. If recovery is to take place it usually proceeds without any relapse until complete.

Treatment.

The constitutional condition at large requires special attention. It is better to use those agencies which will promote the natural course of the disease than to adopt any debilitating measures such as bleeding. The hard and

painful breathing may be relieved by the hypodermic use of Macendie's solution of morphia, or by an opiate given by the mouth. A good use of protecting the chest and so preventing unfavorable symptoms, is the use of a cotton padding jacket wrapped around the chest and covered with oiled silk. This protects the chest from change of temperature. There is no specific treatment for the second stage. It is likely that by the use of large doses of quinine and morphia the second stage may be prevented provided the patient be seen in time; but if the second stage be already established this procedure will not have the effect of cutting short the attack. Such drugs as

the veratrum viride might be used in the first stage, but not in the second, when the heart is weak, for such agents would be likely to do more harm than good. Bicarbonates of potassium and of ammonium may be given in the third hour, ammonia being the greatest heart stimulant in the entire materia medica. The temperature should be continually noted, as well as the action of the heart. Temperature may be reduced by sponging first the arms then the lower limbs with cold water. It also has been recommended to apply bladders of ice to the sides of the neck, over the carotid arteries in order to cool the blood going to the head.

The sulphate of quinine is reco-

recommended as an antipyretic in this stage. It is given in doses of twelve or fifteen grains. If the pulse goes up to 115-120 in the minute there is an indication that the heart is getting weak. The ear should be applied to the chest to ascertain the condition of the heart. In the case of old subjects and those who have been addicted to the use of alcoholic liquors it may be advisable to administer a small quantity of brandy at this time cautiously. About ten the crisis of the disease the patient should be seen twice a day. The carbonate of ammonia may be given with a little brandy. If the kidneys seem not to be sufficiently active, in ten or fifteen drops

of the tincture of digitalis [illegible] five
or three times a day.
The last measure that we could adopt
to aid the clearing up of the lungs
would be a blister applied over the
affected side.

Jan. 13th. 1887

Typhoid Fever
Thesis By A. J. Edmonds Jr

Typhoid fever is an acute febrile disease which is fully of an contagious and characterized by an eruption on the skin & abdomen, and a form of diarrhea. It is not low delirium and by thickening and ulceration of Peyer's patches. Many names have been given to the disease of which typhoid fever is one. It was called by the name of low times on account of its supposed resemblance to typhus fever. It is called by some continued fever and therefore distinguished from typhus fever. The last name is enteric fever by which it is also called. It is the most prominent fever met with the exception of the

caused by malaria such as vomiting
and [illegible]
[illegible]
fever [illegible]
[illegible]
but nevertheless seen in them it is
also rare in old persons but when it
does occur it [illegible]
more serious
Symptoms [illegible]
[illegible]
[illegible]
[illegible]
caused by poison very much concentrated
it may & will begin suddenly with
vomiting and purging When the
actual attack has set in there may

be and is nearly always [illegible]
with [illegible]
the first week the bowels are loose.
[illegible]
the second week. They are waking of a
[illegible]
as the [illegible]
on pressure over the right iliac region
[illegible]
[illegible]
the fourth day [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
appear in crops which go away in two or

three days [illegible]
has nothing to do with the severity
[illegible]
long [illegible]
and only [illegible]
there [illegible]
in remittent fever the spots are not
elevated nor they disappear on pressure
These spots are said to be absent
in from two to twelve of cases
the [illegible] of [illegible] not
to be increased in the third week
It [illegible] the [illegible]
[illegible] the first week the
temperature [illegible] may be [illegible]
in the morning & be higher in the

fall in the temperature but not so low as the morning before. In the evening the temperature was higher than the evening before & again on the following morning there will be another fall but [illegible] but [illegible] and so on until its maximum is reached. During the second week the [illegible] [illegible] to [illegible] the [illegible] & fall [illegible] [illegible] capable of [illegible] rise unless it falls below normal without any obvious cause & this is to be looked upon as rains as it

[illegible] [illegible]
is not often present before the third
week & then is generally worse at
night It is generally quiet but may
be severe. In the second week there
may be dullness of mind the patient
seems not care for any thing There may
be involuntary discharge of urine Hem-
orrhage occurs about once in twenty
cases during this week to When it is
slight it is generally due to capillary
oozing but when quiet & comes with
a gush it must be one of the [illegible]
vessels & the danger no matter how
slight it [illegible] to the [illegible]
dangerous hemorrhage it may
occur in the first week but is not

often seen under the microscope. When slight it is not to be looked upon as dangerous [illegible]

[illegible]

distribution of blood vessels are seen [illegible]

The glands [illegible] granular surface [illegible] glands are not always [illegible] but sometimes they also [illegible] official

The Papillæ [illegible] inflammation [illegible] generally results in the death of the patch [illegible]

burst & discharge their contents. When
ulceration takes place constipation
generally commences at the third
week and it takes about two weeks
for each ulcer to heal. If the glands
are bitten it is impossible that
ulceration can be prevented. In bowel studies
these changes are more marked near
the ileo coecal valve & become less so
as they recede upward. The glands
also become generally affected
in the last stage. If the patient
survives long take place & a cicatrix
is set up this is to be checked
The mesenteric glands generally do not
suppurate but become swollen yet
they may suppurate and a vein may

[illegible] [illegible] may take place
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
returns to its natural size in the
third week. The liver may also be
enlarged. The blood [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] in health. [illegible] [illegible] are
increased. The tip of the tongue
and lips [illegible] become [illegible]
coated which sometimes becomes
detached in flakes. [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] to
[illegible] [illegible] [illegible] of fatty degeneration
generally, the [illegible] of the [illegible]
[illegible] tongue. The abdominal muscles which
are most [illegible] affected are the recti.
The muscles of the thigh are also

affected and sometimes there is [illegible]
[illegible] The [illegible]
are the premonitory of rose spots & some-
times an eruption takes place which
is a favorable sign as it indicates
that [illegible] favorable
[illegible]
shown that it [illegible] the [illegible]
of a Bullet [illegible] different
from any other & is found in this
disease & in the other it is [illegible] to
any other variety. It may be found in
the spleen after death & may also
be found in Pyeric patches & in
the faces. There is no doubt that
the development of this disease may
be prevented by bad hygienic surrou-
ings. Among the following [illegible]

an age & various chronic disease age is by far the most common. The age at which it is most common has been mentioned before. It is not a contagious disease nor in the right sense can it be said to be infectious but it has the power of [illegible] which are used by persons & among the most common is water. It is through this that the greater number of the diseases is carried

Diagnosis. At the outset there is difficulty. A person may have for the disease to develope itself. The disease may be mistaken for something else but by careful examination it can be made diagnosis by the different diseases

of the same [illegible] as that [illegible]
before [illegible] they [illegible]
& [illegible] of typhoid
fever & [illegible]
are they [illegible] the
character of the [illegible] of the [illegible]
It [illegible] for [illegible]
But in [illegible]
that & the [illegible] symptoms
will be [illegible] from the first
which in typhoid [illegible]
at first [illegible] independent [illegible]
[illegible] there are [illegible]
gastric symptoms. It may be
diagnosed from typhoid [illegible] by the
fact that in [illegible] the
temperature [illegible] up to about
103 to 104 [illegible] the first week

[illegible] typhoid
fever. [illegible]
and [illegible]
[illegible]
due to a [illegible]
[illegible]
[illegible] by the [illegible]
& by the recurrence of chills
Prognosis [illegible] different
places In [illegible] all
of the cases are mild while in
others they are grave A good deal
depends on the time when the
patient [illegible]
[illegible] death is
generally caused by [illegible]
or by the [illegible] high temperature
& weakness; [illegible]

[illegible]

[illegible]

[illegible]

not gone over 104 by the eighth day

[illegible]

as a grave symptom as it generally indicates hemorrhage but not necessarily [illegible]

grave as it indicates that fever mania has set in

Treatment. First of all hygienic [illegible] should be enforced

the room should be ventilated still

[illegible] of

the temperature [illegible] the first two weeks [illegible]

[illegible] must be antiseptic

The diet should be [illegible] flour
meat & milk but have the [illegible]
an egg beat up with water & cleanse
but no antiseptics need be given
When the disease has once set in it
cannot cure. If the temperature
rises it should be watched. If it
be above 105 the baby [illegible] then
a cold bath [illegible]
of the feet & back & feet [illegible]
[illegible] for it is best
[illegible] to be followed [illegible]
When put in a bath if the temper
falls [illegible] [illegible] the
patient at once but the fall be
gradual [illegible] but the patient
then [illegible] & [illegible] than [illegible]
[illegible] be [illegible] It should not

be practised after the first eight or
nine days When cold sponging is
ended [illegible] the water should be about
[illegible]
[illegible]
[illegible] the part of the patient
[illegible]
it They should be given in large doses
[illegible] of [illegible]
[illegible] of Quinine [illegible] the temp-
erature will begin to fall in one
hour or two & will remain so for 12
hours or twelve hours when it will
begin to rise then it should be given
the bysulphate given by [illegible]
is the best method of giving it In
those cases when Quinine fails
then nitre spirit should be given (It

sometimes produces nausea & vomiting
& [illegible] the heart [illegible]
the [illegible]
[illegible]
are of great value in [illegible]
[illegible] of the blood & [illegible]
& [illegible] subsequent [illegible]
the [illegible]
[illegible] the heart [illegible]
[illegible]
[illegible] the [illegible]
[illegible] hypodermic [illegible]
[illegible] If [illegible] is [illegible]
is [illegible] there [illegible]
[illegible]
[illegible] blood [illegible]
to Opium being the best [illegible]
[illegible] the heart. It is best not

[illegible] but
[illegible]
[illegible]
four such doses have been given then
[illegible]
[illegible]
[illegible] the patient
[illegible] suddenly
a hernia in the abdomen. It is also
[illegible]
[illegible] the
patient [illegible]
[illegible] but
this kind little hope we have of
the patient [illegible] of the
[illegible] the [illegible] of the
[illegible] there is hope [illegible] should

be use [illegible] If [illegible] there
seem at should be [illegible] smaller
[illegible] small [illegible] [illegible] to
the [illegible] summary of a large [illegible] [illegible]
[illegible] [illegible] [illegible]
of the [illegible] [illegible] large
[illegible] [illegible] [illegible] [illegible]
be taken Here the [illegible] Egyptian
& the application [illegible] to the
[illegible] system must be [illegible]
to the [illegible] [illegible] [illegible] [illegible]
[illegible] there is found [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
general rule [illegible] [illegible] [illegible]
for [illegible] the [illegible] [illegible]
[illegible] the [illegible] [illegible] found much [illegible]
but there is not always the [illegible]
of there [illegible] must [illegible] [illegible]

[illegible] be given frequently at least
to give it in small [illegible]
short intervals. The first [illegible]
should be [illegible] and a [illegible]
be changed but rather [illegible]
then stop the use of it at once.
Complications of [illegible]
[illegible] at [illegible] be [illegible] by the
[illegible] use of temperature. The
blood should circulate through the
[illegible] and [illegible] the
blood stasis is generally [illegible]
the lower lobe of the lungs
it occurs with the pneumonia which
the patient has contracted. It
should be treated by [illegible], the
feeding of the patient [illegible]
[illegible] and should
[illegible]

be protected with [illegible] The [illegible]
ation should be removed with [illegible]
s the hair shaved with [illegible]
The indications of bed sores are the
not unfavorable [illegible] of [illegible] [illegible]
have [illegible] [illegible] It [illegible] be
tested by [illegible] with [illegible]
s taking of the [illegible] If the
skin be [illegible], [illegible] [illegible]
must the [illegible] with [illegible] of
[illegible] [illegible] s [illegible] [illegible] [illegible]
of the balsam of Tolu

The [illegible] must also be
[illegible] if they be not [illegible]
[illegible] they may not be
healed If [illegible] then the
administration of the [illegible]
mixture with [illegible] of the

vegetable astringent [illegible] given [illegible] the [illegible] constipation [illegible] cases it may [illegible] I [illegible] may exert from the first. In the latter stage of the disease it is best not to give any purgative but rather [illegible] by an enema. If the tongue is coated at first & the constipation exists in the mid part of the bowel there a small dose of some mild purgative may be given. Calomel is by far the best. Relapse [illegible] occurs from some cause as the administration of solid food too early & getting about too soon.

H. J. [illegible]

1950

Genius Eruditus,

Probably there is no kind of [illegible] duty in the practice of medicine fraught with so many difficulties as diagnosis. Yet [illegible] incurable diseases [illegible] the Science of medicine [illegible] since the time of Hippocrates! [illegible] combat this because the physician having satisfied himself that he is treating such a disease, knowing that he can do nothing [illegible] to the [illegible] this [illegible] duty performed and that no [illegible] could do more. But how different is the situation when [illegible] face to face with the [illegible] symptoms the

[illegible] to inter-
rogations — [illegible] of outraged nature calling
aloud for help, falls on deaf ears or if heard
[illegible]

A more embarrassing problem could
perhaps be [illegible] in all the [illegible] of
Science. His reasons like this, where
[illegible] the calling has
[illegible] when the buffoon at large the jury
must [illegible]

May he not that insufficient premises
often work false conclusions. This is
most often admit to be true where the examina-
tion has been marked through the ignorance
[illegible] the [illegible]. But to be
[illegible] to [illegible] and his profession, and
[illegible] the slightest attention to detail.

will compare favorably with any other [illegible]

[illegible]

[illegible] no [illegible]

[illegible] our own experience or that of others. Bacon well says "[illegible] only [illegible] to determine [illegible] and [illegible] cure the [illegible] the curious [illegible] and [illegible] to [illegible] memory.

[illegible] Inspection and Dissection - [illegible]

[illegible]

volve - from a desire on the part of the [illegible]

is discernible [illegible], as is the case with the young they seem to be incapable of giving expression to their sufferings – yet if relieving them would be [illegible] in [illegible] so clear that the [illegible] [illegible] the cause of the trouble. [illegible] certain there, but not [illegible] as [illegible] to its particular organs, is [illegible] as [illegible] senses. This appears to me [illegible] consequence, and the physician must neglect the cultivation of his senses, and his [illegible] at greater proficiency. The [illegible] may [illegible] in its application in Digestion; [illegible] Discussion & auscultation, and [illegible] by means [illegible] the [illegible] in inhalation. We will now [illegible] our attention to the [illegible], [illegible] to some extent its value as a means to diagnosis. I have already [illegible] its

[illegible] of breathing & the cries of infancy

[illegible] will our friend to those means of its special

conditions calling for its use, in diseases of that

time of life when [illegible] so strongly

[illegible] too [illegible]

[illegible]

diseases. The [illegible] use of this method, by ob-

serving the movements and [illegible] of child

both [illegible] and [illegible] [illegible]

condition [illegible] of nutrition & circulation

[illegible] our general condition of skin and

[illegible] the character of the circulation.

In health we see a calm quiet countenance;

breathing [illegible] and eagerly taking nourish-

ment from its mother's breast, body & [illegible]

flushed, with limbs drawn up and in constant

motion. and we hear that peculiar crying

[illegible] and [illegible] from pain.

[illegible] to the most blank expression of countenance with regular respiration letting us that all is well and that nature's [illegible] is carrying on its process of restoring from this moment to fully developed human being with all his strength of head and faculties. But upon the occasion of [illegible] another feature is presented: the face becomes flushed the infant no longer sleeps most of its time in sleep, but tosses restlessly from side to side and at times cries, and anxious expression of countenance prevails. Soon [illegible] spring and returning eye bright and shining with enlarged pupil. [illegible] head, and brain firmly [illegible], [illegible] sucking. — all this tells to the [illegible] eye that [illegible] is [illegible].

Chapin came to the rescue of the

and irregularly, with wings of three widely dis-
tended with each breath. Bruce entrenched

[illegible]

which would establish a conclusive diagnosis.

(9) The mother or nurse will also discover these [illegible]

[illegible]

For instance, [illegible]

[illegible]

All the time [illegible] it sleeps [illegible]

[illegible]

[illegible] to the parents with [illegible] treatment the child

[illegible]

[illegible]

so well. You see a bad face more [illegible]

and contracted. It has drawn our gums. Skin dry

[illegible] F.

[illegible]

with blood, tongue of a brownish color and at [illegible] white patches, curdy material on the cheek [illegible] to a disordered condition. This you know to be inflammatory diarrhoea but this is amenable to [illegible] removed. Shortly after you make your third visit. The fecal evacuations are now numerous with lumps of casing on the outskin and the large amount of blood mixed with mucus. [illegible] [illegible] of hot water of [illegible] face will be seen emaciated with mouth hooked and drawn and dark circles around the eyes. Tongue of a dirty brown color, and child will die delirious in any fashion you may learn it. [illegible]

Thus on the verge of the gum the thickness of tissue is so little and the end is near, and what seemed a [illegible]. Simile morbum therefore not only calls attention to the varieties of disease, but assists in detecting its various stages.

[illegible] which is so destructive in its results. We can now diagnose the various emphysemas by simply the condition of the gums in brushing and what is required, and in short all conditions must be determined more or less accurately by this method.

In concluding this part of my subject I would [illegible]

[illegible]

found in discs in this class of our patients.

But it does not end here: we must make use of it in the diagnosis of diseases in adults as well. [illegible]

[illegible] tion and treatment as well as condition where [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

lenitive - General Malaise, - Pains in [illegible]

[illegible]

ascription of this disease alone. They are

numerous - over the chest and abdomen - about the

coating

flakes of exudes leaving it mien

ulceration. Or else the exudes may have a

an acute mania with a suicidal tendency which is sometimes the case. The tongue [illegible] a fatty degeneration of muscular [illegible] which [illegible] The skin may [illegible] coats of the intestines, and in fact this dilatation may be so great as to seriously embarrass [illegible] find [illegible] drops, Face wearing an anxious expression [illegible]

the

again me

this method [illegible] in the various [illegible] of bright's disease - for instance, the marble hue of the skin, the waxy face with oedematous lids - and general anasarca cannot be mistaken - The glittering eye, hectic cheek and general emaciation will, in some cases, [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] cases mentioned. How do we [illegible] [illegible]. This method of diagnosis is exceedingly advantageous in Nervous diseases, where we [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

trouble is in the brain itself or the symptom is only a local manifestation. How else [illegible]

[illegible] sight [illegible] which the [illegible]

[illegible]

[illegible]

[illegible] sclerosis — [illegible]

[illegible] itself in the [illegible]

[illegible]

Again the [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Again the [illegible]

[illegible]

In all these [illegible] in treatment

diagnosis. Last of all let us [illegible] previous to death which are also important lest we be deceived into giving a [illegible] [illegible] are recognized even so long ago as the [illegible] [illegible] and [illegible] all. [illegible] cold brow stand out great drops of sweat [illegible] the intense agony of the soul leaving

[illegible]

[illegible] that our art avails nothing against

the great [illegible] and that [illegible]

[illegible]

[illegible]

[illegible]

[illegible] death. [illegible]

[illegible]

[illegible]

dissolution.

[illegible]

Md. Univ. Hospital

Feb. 12th 1887

Chemistry of Digestion

D. C. Engle
Pa.

208.

Chemistry & medicine.

By digestion, is meant the function, by which substances intended for food undergo various changes in the alimentary canal. The object being to separate the part intended for alimentation, from the part not so intended, and to render it suitable, so that may be taken up by the membranes intended for its absorption.

By chemistry of digestion is meant the changes in the process which are purely chemical aside from the physical changes, which render the.

chemical changes possible.

All substances intended for food may be divided into two great classes viz: the organic, or all those as formed by living organisms; and the substances not so formed, called inorganic and belong to the mineral kingdom.

In this article we propose to deal only with the organic. These may be subdivided into three classes as: First, the carbohydrates which includes the sugars, starches and gums. Second the hydrocarbons, which includes the fats. Third the albuminoids or

proteid substances. We shall take starch as a typical carbohydrate.

We will suppose that a quantity of starch and albuminoid proteid matter, in proper proportion for nutrition, have been introduced into the alimentary canal. We now to examine the chemical changes which they will undergo by coming in contact with the various substances secreted by the glands of the digestive tract.

The first reagent with which the food comes in contact is the saliva of the mouth a secretion of the parotid, the sublingual and

sub maxillary glands. The mixed saliva of these glands is an almost clear, colorless odorless liquid. It is composed of water in great amount; mucin which renders it viscid; and a ferment called ptyalin together with several of the mineral salts. The saliva is alkaline in reaction. The secretion of each gland differs somewhat from that of the others. The parotid secretion contains more water and less mucus than the others. The sub maxillary is less watery and more viscid. The sub lingual is least watery most viscid, and strongly alkaline.

The saliva acts only on the starch. This action is due to the ferment ptyalin which has the property of changing starch into a soluble sugar called maltose. Starch is composed of two substances: granulose, which is the substance used in mastication, and cellulose a woody substance not used in digestion. This substance is arranged in a series of shells within which the granulose is contained.

Ptyalin is a hydrolytic ferment causing a molecule of the starch to take up a molecule of water and become a soluble sugar.

ptyalin is also a catalytic ferment, acting only by its presence. It acts readily only in the presence of an alkali; but may act slowly in a neutral or slightly acid solution. The activity of the ferment is increased by the action of some drugs as sodium chloride, sodium sulphate or the salts of strychnia. These seem to hinder its action.

Ptyalin acts most readily on boiled starch. Boiling breaks up the cell wall and exposes the granules to the action of the ferment. It acts very slowly or not at all on raw starch. Some kinds of starch is acted on more readily than others.

Corn starch is one of the easily digested starches. Starch is first changed to dextrine and probably several substances before it reaches maltose. These stages may be shown by their staining differently by various staining materials.

The fact that starch is changed to sugar is shown by the absence of the starch, as shown by the iodine test, and the presence of sugar as shown by Fehling's test for sugar.

Only a small part of the starch is changed by the saliva, the largest part passing on unchanged into the stomach. The food as it leaves the mouth, as it reaches the stomach.

consists of fats and proteid matter, unchanged, a small amount of sugar which has been made from the starch; starch unchanged and partly changed, that is to say of the intermediate changes between starch and sugar. To these have been added the products of the saliva, the mucus of which cannot be digested.

In the stomach the food meets with the gastric juice a secretion of the glands of the stomach. The gastric juice is nearly colorless, has a sour taste a peculiar odor, and is acid in reaction. The reaction is due to hydrochloric acid,

The acid is free and constitutes two tenths of one percent of the secretion. The gastric juice like the saliva, contains a ferment; but unlike the saliva ferment, it acts on proteid matter, and in the presence of an acid. This ferment is called pepsin. Pepsin is also a hydrolytic ferment and acts by catalysis. There is also in the gastric juice a large quantity of mucus, some of the mineral salts, and a large amount of water

The digestive property of the gastric juice is due to the hydrochloric acid and the pepsin. They act on the proteid substance changing it to

peptone; but as in the salivary diges-
tion there are several intervening
products. The first of these pro-
ducts is syntonin, an acid albu-
men formed by the hydrochloric
acid, which causes the proteid sub-
stances to swell up and soften.
In this condition they are readily
acted upon by the pepsin. The pep-
sin first changes this syntonin
to pro-peptone, and then pep-
sin continuing to act, to peptone.
Peptone is readily absorbed by the
membranes. Peptone formed by
different proteid substances are
much alike all being readily sol-
uble.

a large amount of peptone in the stomach seems to hinder its further formation.

A small amount of some alkali at the beginning of digestion increases digestion by increasing the flow of gastric juice; but a large amount hinders digestion.

There is a peculiar ferment in the stomach of a child which digests milk more readily than pepsin would.

Let us examine the food as it leaves the stomach and enters the intestines. The starch has been partly digested, and a small part of it absorbed; but part of

the digested starch has not been absorbed. There is also a large amount of starch which has not been acted upon and some of the "intermediate products."

Much of the proteid matter remains undigested. Some of it has been reduced to peptone and part of the peptone has been absorbed; but part of the peptone remains. There is also pro-peptone.

The fat remains unchanged, but the proteid envelopes in which globules were contained have been digested and the fat set free.

To the products taken as food there have been added mucin, water, min-

oral salts, besides other products of the saliva and gastric juice.
All these various products as they leave the stomach constitute a soft grayish mass called chyme it has an acid reaction.

We come now to the most important changes in the process of digestion. When the chyme passes into the intestine it meets the pancreatic juice, and the bile.
The pancreatic juice is secreted by the pancreas. It is a colorless, odorless liquid having a saline taste, and an alkaline reaction.
This secretion contains water, mucus, and some of the mineral

salts of which sodium carbonate gives it its alkalinity. It also contains three ferments viz: a fat splitting ferment called steapsin; a diastatic ferment called amylopsin resembling ptyalin; and a proteid ferment similar to pepsin in its action, and called trypsin. These ferments act only in the presence of an alkali.

The acid chyme is rendered alkaline by the pancreatic juice and bile. The fats, which have so far remained unchanged are now acted upon by these juices and the fatty ferment of the pancreas.

The effect of these is to break up the fats and form a fine and permanent emulsion. The fatty ferment splits up the fats into glycerine and a fatty acid. The alkaline juices act on the fatty acid, partly saponify it, and breaking it up still finer, thus producing a fine emulsion and a soap, both of which are readily absorbed.

The second one of these ferments amylopsin acts on starch, reducing it to maltose or dextrose which are redily absorbed. It acts much more rapidly than ptyalin acting also on raw starch almost as readily as though

it were it were cooked.

The third one of these ferments, trypsin, is a proteid ferment. It is similar in its action to pepsin, producing peptones and propeptones from the albumens; but its action is somewhat different from that of pepsin; it acts by erosion, changing the proteid matter at once into peptone, without its swelling up and softening as was the case in the digestion by pepsin.

Bile is the secretion of the liver. It is a green colored fluid alkaline in its reaction due to the salts of sodium which it contains

Besides water its principal constituents are sodium taurocholate, sodium glycolate, and the coloring matter biliverdine and bilirubine.

One of the functions of the bile is to render the acid chyme alkaline as it enters the intestine. This action has already been mentioned and is due to its sodium salts. These salts are again absorbed into the system.

Another function of the bile is to emulsify fats, not splitting them up as does a ferment, but probably by its alkalinity. It also seems to favor absorption of matter in the intestines, though this is inferred from analogy.

Another function of the bile is to prevent fermentation in the intestine. It also acts as a disinfectant of the feces after excretion. The coloring matter of the bile is excreted with the feces. Some times by perverted function the bile is absorbed into the circulation its coloring matter causing a discoloring of the skin called jaundice. The mucus of the bile is excreted with the feces unchanged.

The changes in the large intestines are not important they being mostly concerned in absorption.

The feces will consist of the

of the food which has not been digested. part of the digested food which has not been absorbed and the products which have been added by the secretions of the digestive tract. The feces will contain some undigested food of one or of each of the three classes of food. Probably also digested and partly digested products, one or each classes which have not been absorbed. So these have been added the secretions of the digestive, and only a part of which have been absorbed. The mucous or mucine which is in all the secretions especially the bile and saliva is not digested and is

found in the intestines unchanged. The coloring matter of the bile and part of its salts are in the feces.

There are also products formed in the intestines by fermentation of undigested food, also gases so formed.

Micro organisms are also found in great numbers. All these various primary, and secondary products, constitute the feces as excreted at the termination of the digestive tract.

O. C. Engle
Green Garden
Pa.

Treatment of Obstinate Malarial Attacks.

The immaginary case before us is a simple ordinary case of intermittent fever. He has a chill every other day. The fever is therefore, of a certain type; and after the chill, the hot stage lasts two or three hours and is terminated by sweating. This has been repeated for some time and will prove that an attack of intermittent fever in a malarious

climate is not to be despised
After checking the disease
with sulphate of Quinine,
the paroxysm will recur, and
the treatment will thus be
brought into discredit, unless
some few points are
borne in mind in regards
the mode of administration.
We should give the
Sulphate of Quinine three
hours before the expected
paroxysm —
Now shall we give small
doses frequently repeated or
large doses [illegible] often?
I think we should give

large doses too often
I think it is best to
give fifteen grains of
Sulphate of Quinine three
hours before the expected
paroxysm
I prefer this to the former
method, for this reason,
which is regarded as indis-
putable; Sulphate of Quinine
although it is not eliminated
from the system with
great rapidity; yet it is
eliminated, and it is eliminated
chiefly by the urine
If we wait to give
it in small doses early

in the morning, by the other morn it would be eliminated, and it would require to be repeated and in larger amount, in order to check the paroxysm. Therefore, it is more economical, as well as more effective to give a single large dose, which is also more agreeable to the patient, for I think fifteen grains given at once will give much less distress than one grain every hour until the same amount is taken into the system.

Large doses diminish the sensibility of the cerebral centre, while small ones cause the excitement of the brain and it also causes tinnitus —
By giving a single large dose of sulphate of quinine at least four or five hours before the time for the appearance of the expected chill will break up the paroxysm.
Now, what shall we do to prevent their return?
We ordinarily hear that the chills are apt to return at septenary periods; but if you look into the

another you will find that they recur in multiples of the original number. Thus, this lesion would return in six days, or if not, then on the ninth day, twelfth, fifteenth, eighteenth or the twenty-first day, and in gouty tidion they are apt to be manifested in multiples of two. On these critical days the remedy should be repeated if we forecast up the chill today, on the day after tomorrow, although he may not have a decided chill, he will have

some significant symptoms, that are evidence of systematic disturbances; he will sweat more wine, he may have a diarrhoea, general muscular soreness or something else that will indicate material poison. He must, therefore, give over quinine again, and repeat it on subsequent days, multiples of the original attack, administered in anticipation of the former hour of the attack

On the morning of the sixth and seventh, thirteenth and fourteenth, the nineteenth

and twentieth and twenty first days, doses of ten grains should be given on each of these days.

Now, what else? Should we abandon our patient in the interim?

Ten grains of bromine will not be sufficient to relieve a damaged liver, or to reduce an enlarged spleen; in other words the condition of chronic malarial poisoning.

The treatment must be directed to this object as well as breaking up the chills, or they will inevitably

return.—

He should give Lugol's solution, in five drop doses given in water before meals, and also give Dobbie's solution three or six drop doses after meals, always proved most efficient aids. It is best about the twenty first day, to give a full antiperiodic dose of Quinine for three days, for by this time there is a much greater accumulation of morbid material in the blood, than at the other periods named. Where the patient is

very anaemic will probably give iron or some preparation of iron

I have found this pill an extra tonic

℞

Dried Sulphate of iron gr. iii.
Sulphate of Quinine gr. ii.
Arsenic acid gr. i. M.

F. pil. No. XXX

Sig. Take one pill before meals.

She should keep the bowels open so as to retard the congestion of the liver and spleen.

She might use for

this mild chloride of mercury
grs X and followed in the
morning by a saline purge
the might use Aloes thus
grs X or XV
The compound coathotic
pills are very good
℞
C.C. pill. No II or III
Sig: Give at bed hour
and the following morn
ing give a mild
purge saline or we
might give castor
oil in small doses
When the fever is
very high and with

get the immediate effect of Quinine we might use it hypodermatically gr 5 iii or iv

The Antipyrine is said to be good to reduce the temperature of the body I have never used it and therefore I do not wish to recommend it

These rules will hold good in all material actions to keep them them in mind and not forget them -

Joseph Peyton Pearrington
Belle Air Chatham Co, N.C.
Dec 30th 1886.

J. S. Evanwright
Belle Voir
N.C.

Theirs
&
Frank C. Francis.

Justice's
Mondria Chittum

16 p.

Asthma. The use of this term is ambiguous. It has been applied to various morbid conditions of the respiratory apparatus characterizing by a spasmodic difficulty of breathing. But it should be limited to an idiopathic affection, consisting in acute, apyretic, coming on in paroxysms and passing off without any morbid alteration of the breathing organs. It is distinctly a nervous disease and being such it has no anatomical changes peculiar to itself. It is true, morbid states may be associated with Asthma but they are results, rather than

a part of the disease.
As regards the pathogeny of asthma, there are two dominant theories: the, and the oldest, is the theory of the [illegible] of the muscular fibres of the smaller bronchial tubes. The other is the theory of tonic spasm of the diaphragm. The former of these theories has the support of the best authorities. A third theory is that of Weber. He argues it may be a just number of factors. In fact, his theory is a combination of all the others.
Pathology. It may arise from causes of disturbance in the

nervous system both central and peripheral. Like other neuroses the peculiar state of the nervous system necessary for its development may be inherited. At least 40 % of the cases are said to be hereditary. Asthma is sometimes found to alternate with other nervous affections. So is also epilepsy with acquired pathology. The exciting causes may be first mental, i.e. a direct irritant brought to bear on the bronchial mucous membrane. Inhalation of irritating powder, dust of a peculiar kind, fumes of sulphur, pollen of certain flowers &c cause it.

in persons predisposed to it.
An attack is sometimes brought
on by certain smells of flowers
in the fields or bog on which the per-
sons lived.
2d. It may be caused reflexly as
by coughing on raised mucous mem-
brane. The impression is received
by the fifth nerve and as its nu-
cleus is in close relation to the
of the vagus it is easily transfer-
red from the one to the other and
is then reflected over its branches
and pulmonary branches. A full
meal especially late at night may
cause it. Another cause is dis-tin-
sion of the bronchial tubes

stipation. In women it may be caused by disturbance of the menses.

3d. Such diseases as Bronchitis and Cough, may be the direct and immediate exciting causes of the disease.

Asthma is by no means an uncommon affection of the heart. It is more frequent in women than in men.

Symptoms: They may be premonitory symptoms the patient being able to tell when an attack is coming. Some persons just before an attack are unusually gay and jovial. With others it is

just the object effect making
them more and better.
Some asthmatics never have a
headache except just before
an attack. The first attack is
generally nocturnal and occurs
most often from about 1 to 4 or 5
o'clock A.M. A person suffering
with the disease may be in good
health and there will be no
symptoms of warning, when suddenly
he will be awakened by tightness, oppres-
sion and a sense of constric-
tion across the chest.
He sits up in bed and, leaning
forward on his arms, with his
mouth open and nostrils widely

dilated, to make an forcible effort to get more air. The rise of the ribs jumps from bed and rushes to the remotest alveoli and leans out to get all the fresh air possible. It may be remarked that patients seldom experience any bad effects from exposing air to the open air or during asthmatic paroxysms. Respiration is noisy and whizzing. They is usually vomit on quieting and the face may be cyanosed. In consequence of the violent exertions the perspiration of the upper parts of the body.

The face is usually flushed and

easily convulsive.
The urine is low and has had re-
sultings of hysterical retention.
For only some days to attest the
urine is less in quantity and of
fluctuate in use and ordinary
characters. There is not much
congestion during the attacks
but as it is passing off the
cough makes its appearance.
The attacks occur terminally in
brown-headed.
Physical Signs. By inspection
we notice that the chest is enlar-
ged the lungs being in rating.
The upper part of the chest will
be seen to narrow laterally to

while movements of brow & cheeks will be exaggerated.
On auscultation we get a very lively respiration sound or it may be absent. When the tubes are full we get loud fine rales.
In early stage of the attack we have coughing and bitterness of mouth but as the attack gains way with expectoration. Nausea rare or unknown.
On percussion we have increased resonance. Inspiration & expiration prolonged. Effect upon it. On inversion. Dullness in comparing with the auscultation signs is to be taken. They are frequently limited

in extent and are constantly liable to change their seat.

Diagnosis. It is most often confounded with laryngismus stridulus, but it may be distinguished from this by laryngoscopic examination and by the fact that in spasm of the glottis the patient for the time is unable to speak, while in asthma he can speak, but dislikes to do so, because it increases the dyspnoea. Another and very important difference is the character of the dyspnoea. In asthma it is expiratory, in laryngismus stridulus it is inspiratory. The laryngoscopic examination, however, is very

of is not practicable.
Capillary Bronchitis may be distinguished from Asthma by the fact that in the former the spasms come on gradually and the tone [illegible] runs high while in the latter the tone is sound and only there is no appearance of tuberculosis.
The agonizing pain which accompanies angina pectoris is sufficient to distinguish it from this disease.
Pulmonary Emphysema has some resemblance to asthma in that it [illegible] comes on rapidly, but the fact that we get auscul-

ness or pressure in the cranium serves to distinguish them. In adding such confirmatory and corroborative [illegible] may be found.

Prognosis. As regards life the prognosis is good, death during an attack is rare. But as for getting rid of the disease it is bad.

Treatment. This is resolved into two objects, one is the relief of the paroxysm and the other is the treatment during the intervals. 1st. For relief of the paroxysm. Any obvious exciting cause should be at once removed. For instance, if the attack be due to a fright

must give an emetic, or if it be caused by constipation give an enema. Always let your patient have plenty of fresh air. A hypodermic injection of about ½ a grain of Morphia is the most efficacious remedy to check the [illegible]. But if the patient be very old or has fatty degeneration or dilatation of heart some other cardiac sedative must be given. Chloral hydrate is recommended. It is said that the best results are obtained when morphia is given by hypodermic and not by the stomach. When given this way the

dose of each should be only about
one half as large as when given sub-
cutaneously. Nausea such as that
causing vomiting, retching, lobeling &c give re-
lief by inducing relaxation,
but these are not in general used
as formerly. Tobacco in most ca-
ses is not to be recommended but
persons who are in the habit of us-
ing it may sometimes be greatly
benefited by it. Cigarettes made
of stramonium leaves often afford
great relief. The inhalation of chloro-
form gives prompt but only tem-
porary relief. Bromide of ethyl in-
halations have given very good
results. Amyl nitrite has been highly

recommended by some authorities but it is by no means so good for asthma as for angina pectoris. Fumes of nitrite of amyl sometimes give relief when inhaling.

Now for the 2d object or treatment during the intervals. First by giving treatment strong & enforced. No one climate or place can be recommended for all asthmatics for they are so different & no rule of others get any whatever. Some are better at the sea shore or at a high land. Some persons will have it on one side of a hill, and not on others. Strict attention should be paid to the state of the alimentary canal and to the skin. If your patient by

running gait time every to the
Outlands of town.
The attacks are continue months
by periodicity. When this is the
case quinine is the most excellent
remedy. If this is any tendency to
skin disease the administration
of Arsenic is to be recommended.
I should advise a residence
there, Winter and Summer.
If your patient is able to do so, a
change of climate is to be advised.
That of Colorado is highly rec-
commended.

Very Respectfully,
Frank V. Fowler
M.D.

Cases of Disease

Left side

[illegible]

under my notice Aug 5th 1866.

[illegible]

[illegible] the lungs

[illegible]

good health. He has never been troubled with any previous sickness except Measles. His complaint is [illegible]

[illegible]

pressure of the chest [illegible] and exposure to the rain [illegible]

time while at work upon

abroad. He was then attacked by a
a long distance above the sea, the
[illegible] incident to the [illegible]

[illegible]

made him so weak that he fell
down at times. He also experienced
[illegible] headache, so severe and
vomiting, and had several attacks of
epistaxis, [illegible]

[illegible]

I rather suspected the character of
the affection and proceeded to make
a more thorough examination. The
general appearance of the patient was
cachectic, being somewhat dis-

and tongue, breathing quickly and
upon half closed lips. Upon being addressed
his answers were [illegible]
little hesitation, his tongue was
covered with a heavy whitish coat
ing except the tip and edges which
were of a bright red tint. He was
[illegible] he said the hep
tic was about 10 months and af
terwards did not show the classic
hectic gradual rising and falling
usually found in this disease.
As the chart appended
temperature and pulse were high
at the time of his entrance to the
hospital and afterwards fell and
continued very irregular, pulse

[illegible] at the [illegible] neighborhood
[illegible] occurred with a stroke perceptible
[illegible] to [illegible] days
[illegible] and then day the patient
having as much as strength to be
passage, and having a dark
appearance [illegible] the
[illegible] gave the [illegible] no time, the
[illegible] connection of the [illegible]
[illegible] in the disease
[illegible]
The lots are guessed in succession
[illegible] his breath has a fetid smell
[illegible] headache and pain in the back
[illegible] among the same day
[illegible] of the [illegible]
[illegible] the time the [illegible] of

and appearance, about sixty [illegible]

[illegible] "

[illegible] about, and the patient experiences

[illegible] tenderness over the abdomen,

particularly in the epigastrium and

[illegible] region. Just why the pain was felt

in this situation rather than in the

[illegible] iliac region, it seems not at

first sight, easily to be made to say, but

the fact suggests to my mind the pos-

sibility of the pathological lesions

lying chiefly in some portion of the

small intestine higher up than the

common seat. There was nothing

characteristic about the temperature

and pulse at this time, save that

they were not so irregular as they [illegible]

[illegible] numbers at [illegible] bed [illegible] [illegible]

[illegible] but [illegible]

[illegible] color, [illegible]

[illegible] fever, his temperature

[illegible] down [illegible]

[illegible] undoubtedly [illegible]

[illegible] changes [illegible] [illegible]

[illegible] night of the disease

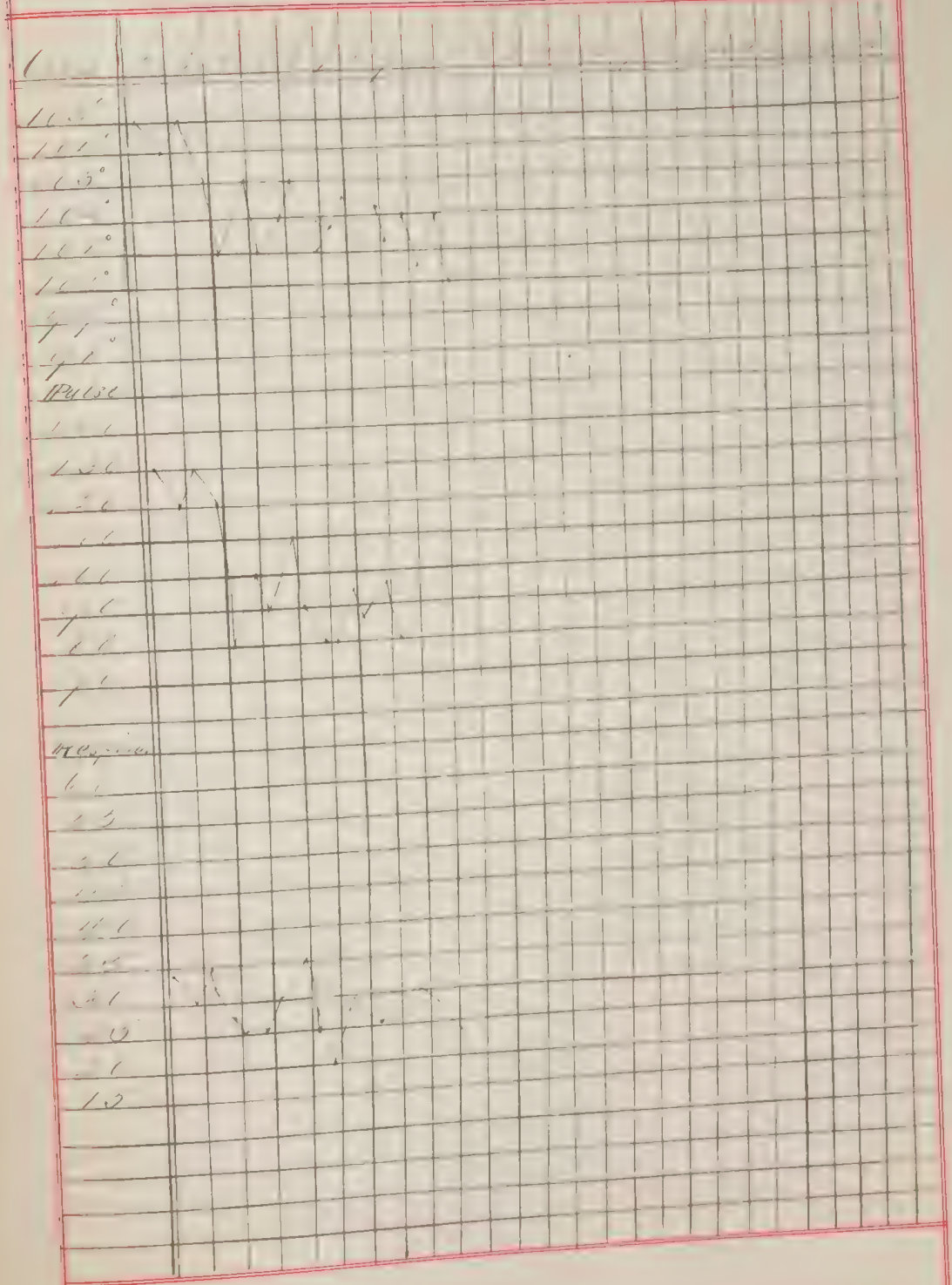
underneath. The redness and stiffness
the sides also disappeared.

The treatment of this case was a mixt
with diet, as a sedative agent
Sunet.

Muriatic Acid. As an astringent

sufficiently on long
tient's life and
for fever, as pain, insomn
for feeling stupor
Internally Inspiration
usual way when

mother a [illegible]
attained a good age [illegible]
hereditary disease in his family.
[illegible] had [illegible] in 1841 and
Japan [illegible] 1842. Heart pressure
illness began about [illegible] years ago.
[illegible] had suffered for 15 [illegible]
[illegible] time, with [illegible]


Pulse
Respiration

[illegible]

[illegible] in [illegible] are

attained a g[illegible]

hereditary dis[illegible] in his family.

[illegible] had [illegible] in 1844 and

[illegible] 1847. His paroxy-

sms began about [illegible]

[illegible] had suffered for 13 years,

[illegible] time, with [illegible]

[illegible] frequent [illegible]

appearance

the ones

to have anasarca,

ascites, and oedema of the epididymis

legs

alternating with a loose one.
The test answer is to be looked
[illegible]
of pure. He also complains of
considerable thirst at times, his
pulse was about [illegible] but very
[illegible] the heart-sound was greatly
[illegible] in intensity.

The treatment adopted in this
[illegible]

considerable improvement. The

writing is one of comparative ease.

A word in regard to some

the

served in the case

be amiss. Considering the history

of

the secreting structures of the con-
[illegible]
It occurs most frequently and is
[illegible]
kidney, and very often, as was the
[illegible]
of the disease. [illegible] the
most plausible explanation is, that
it is dependent chiefly upon the
deteriorated condition of the blood
which results from the retention
of insoluble products, and the gen-
eral [illegible] of albumen. In this way the
blood becomes thin, and the liquid

part, relatively in excess of the solids, allowing its free circulation through the capillaries, which themselves from poor nourishment or probably more directly from the action of retained products are weakened, and unable to perform their functions properly. The action of the retained substances on the nervous centres is sufficient to account for many of the symptoms in these cases. Headache convulsions and coma are undoubtedly due to this cause; and why may not Cardiac Hypertrophy which is so often and so prominent also be explained in a similar way. The action

[illegible]
[illegible] of the nervous system, and
[illegible] the latter being carried
to every part of the brain, these
centers which regulate the heart's
action must of necessity be invaded
and their function interfered with.
[illegible]
[illegible] Or it may be that
the cardiac ganglia situated in the
walls of the heart are primarily
impressed by the poison causing
an over-action of the organ.
[illegible] it is hypertrophy, which
[illegible] of time gives way to dilatation.
The primary cause of
disease in this case is not well

made out, according to the state-
ment of the patient, he has never
been [illegible]
alcoholics,
subject to any unusual exposure,
I think it is probable that he may
have been suffering from renal
[illegible] tion and albuminuria
[illegible] long time prior
[illegible]
rence of dropsy, [illegible]
[illegible]
headache for [illegible]
[illegible]
probable a tendency [illegible]
[illegible] ited at that time which unde
[illegible] exciting causes, would [illegible]
[illegible]

Thos. Adams, Nativity age: 26.
Occupation that of a horse car driv
His mother is living; father died
twenty-three years ago from Ch
Phthisis. Has two sisters living and
in good health. Had two other relati
who died with lung disease.

Several months previous to his
[illegible] to the hospital, patient
[illegible] been exposed, caught cold, and
a cough set in, which was accom
by abundant expectoration. On
[illegible] for the first time he com-
[illegible]
[illegible]
[illegible] was anæmic and consid

emaciated, and [illegible]

his weight being reduced from 140 to [illegible]

[illegible] a slight loss of resonance was detected over the left apex, and large [illegible] the situation on inspiration and expiration [illegible] the apex. Expiration on that side was also prolonged. The temperature of patient was a few degrees [illegible] in the evening, at which [illegible]

and was put on a diet consisting

he was given:

Nux vomica Tincture

For diarrhoea he was given a pill at

night opium gr. ij

breathing was

left lung, also a

The patient

worse and died

Id

Synovitis Effusa.

Mrs. M. A. H. — aged 45 years, about Oct. 15 - 1886, complained of pain in the ankle of her left foot, and in the course of the following two days the joint became swollen to such an extent as to render it impossible for her to put on her shoe.

On examination revealed a [illegible] fluctuated very perceptibly. A slight redness of the skin covering the joint was observed, which extended half way up the leg, and the tissue immediately around the joint was swollen

Suicide of Polack, and

appears

graduating

Remarks. — February 12 188[illegible]

[illegible]

ported during the months of July and August 1886, after the writer had attended but one course of lectures upon the subject contained, and it is to be hoped that anyone who may take the trouble to read them, will make due allowance for the want of knowledge and experience which this exhibits. Had the writer [illegible] sufficient time to have reported his cases during the [illegible] of the discrepancies [illegible] therein, would not have appeared.

Respectfully —
Elmer E. Crasher.